

REPORT TO SHASTA COUNTY RTPA

SUBJECT		MEETING DATE	ITEM NUMBER
Updates on Shasta <i>FORWARD>></i> and Senate Bill 375 Implementation, Approve Request for Proposal		10/27/09	6

RECOMMENDATION

It is recommended that the Board:

1. Receive an update on the Shasta*FORWARD>>* Regional Blueprint and Senate Bill 375 (SB 375) implementation; and
2. Approve distribution of the attached 'Shasta Regional Geographic Information Systems (GIS) Platform Feasibility Study' Request for Proposals (up to \$65,000).

SUMMARY

Existing planning processes and new travel/land-use modeling and planning directives stemming from SB 375 call for complete, merged, and accessible GIS information covering all jurisdictions in Shasta County. The SCRTPA received grant funds to explore potential host/location options for housing and exchanging regional data at one location. A request for proposals is attached for Board consideration.

DISCUSSION

Shasta*FORWARD>>* Regional Blueprint Update – The second and final phase of the Shasta*FORWARD>>* public engagement effort concluded September 30, 2009. Project surveys and additional public input received through October 15, 2009 will be included in the final results. A verbal project update will be provided at the October Agency meeting. A presentation of the final report and recommendations is scheduled for the February 2010 Agency meeting.

SB 375 Implementation Update – SB 375 adds new regional planning and modeling requirements to California's eighteen metropolitan planning organizations. Most notably, the SCRTPA must develop a sustainable communities strategy (SCS) for achieving Shasta County's greenhouse gas (GHG) emission reduction target to be set by the California Air Resource Board (CARB).

Senate Bill 406, a funding vehicle enabling regional agencies to implement SB 375, was vetoed by the Governor October 11, 2009. The state has yet to provide a stable, long-term funding solution for this mandate.

The Regional Targets Advisory Committee (RTAC) has submitted its final recommendations to CARB on the factors to be considered and methodologies to be used in the setting of regional GHG emission reduction targets. In brief, the Committee recommends a combination of locally generated modeling outputs and 'best management practices' (BMP) to arrive at aggressive but achievable regional targets. BMPs are GHG emission reduction strategies – validated by data from empirical studies, blueprints, and MPO modeling outputs – that effectively quantify the magnitude of GHG reductions achieved through implementation of specific policies and practices.

The Committee further recommends that CARB set a single statewide uniform target; that regional targets be expressed as a percent per-capita GHG emission reduction from a 2005 base year; and that targets be adjusted up or down to respond to individual differences between regions. A summary of the RTAC report by the League of California Cities is attached; a full report is available online at www.arb.ca.gov/cc/sb375/rtac/report/report.htm.

Prior to setting regional targets, SB 375 requires that CARB consult with each MPO region. Following individual consultation with all MPO regions, CARB will provide a draft target to the SCRTPA no later than June 30, 2010. Final targets will be provided by September 30, 2010. An SCS designed to effectively meet this target must be completed and incorporated into the next Shasta County Regional Transportation Plan (RTP) update in 2014.

The first of many meetings with ARB is scheduled on October 26, 2009. It is staff's intent to negotiate an achievable target with CARB in order to maintain the region's competitiveness for future discretionary transportation funding and to minimize any negative California Environmental Quality Act (CEQA) implications related to local project approvals.

Because local travel/land-use modeling outputs will be used in regional target setting, and for quantifying progress toward that target, efforts to enhance modeling detail (e.g. smaller transportation analysis zones and/or parcel level data) and add modeling sensitivities (e.g. the ability to quantify the affect of infill development, mixed-use development, density, urban design, etc. on vehicle miles traveled) represent the best strategy for determining what is fair, appropriate, and accurate for Shasta County.

A statewide assessment of regional modeling capabilities performed by the RTAC revealed that the SCRTPA has limited or no sensitivity to many of the key variables influencing vehicle miles traveled. Under Proposition 84, the SCRTPA applied for and was subsequently awarded \$400,000 in order to:

- Increase Shasta County Travel Demand Model sensitivities to include indirect factors affecting vehicle miles traveled (i.e. the affect of infill development, mixed-use development, density, urban design, etc.);
- Improve Shasta County Travel Demand Model precision via smaller transportation analysis zones and parcel level analysis capability; and
- Create (or compile and merge from existing sources) GIS data needed for travel, land use, and GHG emission analysis.

An RFP for modeling and GIS enhancements is currently under development for future Board consideration.

Shasta Regional GIS Platform Feasibility Study – As directed by the Board on October 28, 2008, the SCRTPA applied for and subsequently received a grant from the California Regional Blueprint Planning Program to study the feasibility of a central location for consolidating and exchanging regional GIS data. The proposed scope of work is limited to studying the feasibility of such a platform and identifying the most suitable strategy for moving forward. Once completed, findings and recommended steps toward implementation will be presented to the Board for further direction.

If implemented, the Shasta Regional GIS Platform would aid in the development of a sustainable communities strategy and serve as a post-planning tool that the SCRTPA and local agencies may use to track and report progress toward meeting goals and targets. While the proposed scope of work is targeted at meeting these near-term purposes and objectives, the project will be designed with an eye toward expanded applications in the future.

Added benefits include:

- Improved efficiency/reduced staff time by obtaining GIS data at one location;
- Knowing that the data acquired is the most current and the best available data source;
- Speedy access and application of GIS as a result of consistent data standards;
- Improved collaboration between local agencies, private sector GIS firms, and educational institutions; and
- Increased opportunity and likelihood of data development grant opportunities.

The overall project budget is between \$55,000 and 65,000, pending the outcome of the proposal process. The Board will be asked to approve a consultant agreement in February.

ALTERNATIVES

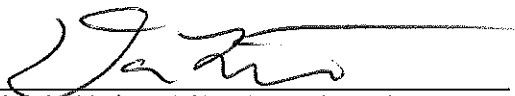
The Board may choose not to approve distribution of the Shasta Regional GIS Platform Feasibility Study RFP. This is not recommended as the grant funds are intended for this purpose. Furthermore, this project lays the foundation for future actions and strategies needed for SB 375 compliance.

OTHER AGENCY INVOLVEMENT

The attached Shasta Regional GIS Platform Feasibility Study RFP was prepared in consultation with the County, three cities, and the Far North Regional GIS Council. Letters of support are attached. The California Department of Transportation provides Regional Blueprint grant funds. The Strategic Growth Council (comprised of State agency directors) provides Proposition 84 grant funds. The Technical Advisory Committee (TAC) has reviewed and concurs with the staff recommendation.

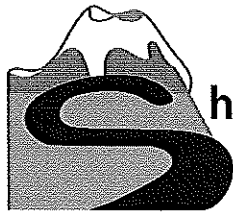
FINANCING

The 'Shasta Regional GIS Platform Feasibility Study' is funded up to 80% through California Regional Blueprint Planning Program grants. California Regional Blueprint Planning grants were awarded to the SCRTPA in FY 2006/07 (\$375,000), 2007/08 (\$140,000), and again in 2008/09 (\$200,000). To date, approximately \$475,000 in grant funds have been expended. The 20% required local match funds are budgeted for in the OWP using State Planning Programming and Monitoring (PPM) funds.


Daniel S. Little, AICP, Executive Director

DSL/DTW/jac

Attachments: 'Shasta Regional GIS Feasibility Study' RFP, including letters of support
Abridged Summary of RTAC Report (League of California Cities)



Shasta County
Regional Transportation
Planning Agency

1855 Placer Street • Redding, CA 96001 • (530)225-5661 • FAX (530)225-5667
E-Mail scrtpa@snowcrest.net • HOME PAGE www.scrtpa.org

Daniel S. Little, Executive Director

Request for Proposals

Shasta Regional GIS Platform Feasibility Study

Inquiries: Questions regarding this solicitation should be directed to:

Shasta County Regional Transportation Planning Agency
Attn: Daniel Wayne, Senior Planner
1855 Placer Street
Redding, CA 96001

(530) 225-5486
dwayne@co.shasta.ca.us

Submittals: Proposal must be received by 5:00pm, January 8, 2010

REQUEST FOR PROPOSALS

Shasta Regional GIS Platform Feasibility Study

Background

The Shasta County Regional Transportation Planning Agency (SCRTPA) is seeking a qualified firm to explore the feasibility of a Shasta Regional Geographic Information System (GIS) Platform.

The scope of work as described herein does not reflect all tasks required to complete the project; rather it represents those portions of the overall scope of work where specialized expertise or assistance is needed. As some work tasks will be divided or shared between the consultant and SCRTPA staff, SCRTPA desires a project partner that can function as an integral part of the local project team and that is also able to complete work tasks independently.

Interested and qualified consultants are invited to submit technical and fee proposals for work in accordance with the requirements outlined herein. The selected consultant will be asked to enter into a formal agreement for the subject services and to provide insurance certificates and other assurances as noted.

This solicitation in no way obligates the SCRTPA to award a contract for the services described herein, nor will the SCRTPA assume any liability for the costs incurred in the preparation and transmittal of proposals in response to this solicitation. The SCRTPA reserves the right to not accept any proposal, to reject any or all proposals, to reject any part of any proposal, to negotiate and modify any proposal, and to waive any defects or irregularities in any proposal at the SCRTPA's sole discretion. Furthermore, the SCRTPA shall have the sole discretion to award the contract as it may deem appropriate to best serve the interests of the SCRTPA. In this regard, the SCRTPA may consider demonstrated quality of work, responsiveness, comparable experience, professional qualifications, assigned personnel, references, and proposed fees.

Should you have any questions regarding this solicitation, please contact Daniel Wayne, Senior Planner at (530) 225-5486 or dwayne@co.shasta.ca.us.

Project Overview

A key issue exposed through Shasta County's Regional Blueprint process was a near-complete lack of contiguous GIS data sets representing the region in its entirety. Data sources were not always easy to find and varied by type, projection, and currency. Once data sets were located and acquired, major data gaps and format discrepancies made the merging of spatial and attribute data a time and cost-intensive endeavor. For years, the SCRTPA, special districts, and local agencies have expended staff time and resources gathering data for multi-jurisdictional analysis on a project by project basis.

The development storage, standardization, and accessibility of region-wide GIS data for Shasta County, neighboring regions, and the greater Sacramento Valley is critical to planning efficiencies, decision-making, and expanded opportunities for regional/interregional coordination. The integration and accessibility of region-wide data translates into tangible benefits for the SCRTPA and other agencies, including but not limited to:

- Improved efficiency/reduced staff time obtaining GIS data in one location;
- Knowing that the data acquired is the most current and the best available data source;
- Speedy access and application of GIS due to data standardization;
- Improved collaboration between local agencies, private sector GIS firms, and educational institutions; and
- Increased opportunity and likelihood of data development grant opportunities.

The consolidation of key GIS data in a centralized, accessible location benefits all local agencies, encourages collaboration between public, private, and educational sector GIS users, may lead to future data development funding opportunities, and opens the door to increased public knowledge and participation in planning and decision-making processes.

For these reasons, the SCRTPA applied for and received a grant from the California Regional Blueprint Planning Program (www.calblueprint.dot.ca.gov) that will help lay the groundwork for a Shasta County regional GIS platform. New funding sources stemming from recent and emerging climate change legislation have been tentatively identified for project implementation and ongoing maintenance, pending the outcome of this study. The SCRTPA will initially make use of the platform to house and make available regional GIS datasets generated via the ShastaFORWARD>> regional blueprint and to assist the SCRTPA in meeting the new metropolitan planning organization (MPO) requirements set forth under SB 375 (see www.dot.ca.gov/hq/tpp/offices/orip/sb375.html and/or www.arb.ca.gov/cc/sb375/sb375.htm).

While the provided scope of work is targeted at meeting these near-term purposes and objectives, the project architecture shall be designed with an eye toward future expansion, in terms of data, geographic area, and technical application.

Scope of Services

The following tasks are not entirely exclusive, but are generally intended to be completed sequentially. Some Tasks may be ongoing, with portions of work conducted throughout the project schedule.

Task A Internal Kick-Off Meeting

Following an intent-to-award notice, but prior to execution of the contract agreement, an internal kick-off meeting will be held between the SCRTPA project manager, consultant project manager, project Technical Advisory Committee (TAC) members, and other key personnel as appropriate. At this meeting, consultant shall present a detailed work plan of how each task is proposed to be accomplished. Any additional, expanded, or modified work task will be discussed and agreed upon at this time, including a final project budget.

**Note: Task A is a non-reimbursable task.*

Deliverables:

- a. Final scope of work and project budget for attachment to contract agreement.

Task 1

GIS Data Acquisition & Management

1.1 – Data Layers

Consult with local stakeholders (those organized by the SCRTPA as well as other stakeholders identified by the consultant) in order to assemble a comprehensive list of project-essential data sets (those related to transportation, land use, and greenhouse gas emissions) and other potentially useful regional datasets as identified.

Deliverables:

- a. List of core or project-essential data and secondary/other data sets as identified. Arrange results in matrix format for comparison by: 1) priority (immediate utility and benefit); 2) current status (data gaps and most recent update); 3) ability to create or assemble respective data sets and accompanying meta-data (data availability and cost); and 4) opportunity/prospects for obtaining future funding (local contributions and grant resources).

1.2 – Data Standards/Protocols

In order to make effective use of GIS data from the various local, regional, state, federal, and private sources, compatibility standards are required to allow for the merging and querying of spatial and attribute data. In consultation with SCRTPA, project TAC, and additional other stakeholders as identified, consultant shall develop recommended minimum standards for all data and metadata uploaded to the proposed host/server location.

Deliverables:

- a. Appraise data availability across the region. Note variances between local agencies and report on the status/extent of GIS data standardization among data sets.
- b. Develop plan for standardizing datasets from various agencies in order to facilitate the merging and querying of spatial and attribute data as well as integration into Shasta County Travel Model, UPlan, and other potential modeling tools on the horizon.
- c. Develop recommended data acquisition method and protocols necessary to protect the integrity of the operating system and data.
- d. Develop recommended quality assurance & quality control (QA & QC) process.

Task 2

Regional GIS Platform Development

2.1 – Explore & Evaluate Data Storage Location Options

A centralized computer or server system for storing and exchanging regional datasets created or compiled by way of the Shasta County Regional Blueprint and other recent or emerging planning efforts does not presently exist within the region. In larger metropolitan areas, the designated Metropolitan Planning Organization (MPO) commonly provides this service. As the MPO for Shasta County, the SCRTPA wishes to explore a full range of potential host and location options for a Shasta County regional GIS data platform.

Deliverables:

- a. Comprehensive list of data storage host/location options. The consultant shall consider all reasonably feasible alternatives, from established off-site locations (other public agencies, contracted private vendors, hosting, cloud services such as Amazon's S3, Cal-Atlas (<http://www.atlas.ca.gov/>), CHAPIS (<http://www.arb.ca.gov/ch/chapis1/chapis1.htm>), and so forth) to a full-on in-house effort with additional RTPA staffing. Intermediate options may include the possibility of hybrid partnerships between public, private, and/or higher education entities. Results shall be presented via a comparative matrix, including 1) an assessment of current capabilities, resources, and capacities of respective host/locations; 2) additional resources/capacities that might be required for implementation; and 3) an estimated cost associated with each option.
- b. Narrative discussion of most promising options. Include discussion of possible data incorporation from neighboring regions and the larger Sacramento Valley at some future date. Based on findings, consultant shall recommend the most suitable host/location option.
- c. Develop a work flow diagram illustrating the responsibilities of all entities involved and the general movement of GIS data from its origin/creation to the viewing/application thereof.

2.2 – Explore & Evaluate Ongoing Maintenance Requirements

Consultant shall, based on the outcome of Task 2.1, provide an estimated annual budget for all major tasks and staffing associated with the maintenance and regular upkeep of the platform and regional GIS data housed therein. Actual examples of similar projects from outside the region shall be evaluated and referenced as part of the consultant's approach.

Deliverables:

- a. Based on the results of Task 2.1 and consultation with the RTPA project manager, consultant shall select at least three (not to exceed five) of the top-rated host/location options to explore & evaluate in greater detail.
- b. Itemized annual budget for ongoing maintenance of the selected regional GIS platform options. Cost estimates shall reflect a range of assumptions based on: 1) platform hosting strategy; 2) the incorporation of primary and secondary data sets (results of Task 1.1); 3) data coordination, cataloging, and file management needs; 4) the frequency and comprehensiveness of routine server hardware and application software maintenance and upgrades, 5) and other factors as identified.

2.3 – Hardware/Software/User Interface

Consultant shall, based on the outcome of Task 2.1, explore and discuss the hardware and software options available to effectively store, manage, process, and share data at project start-up as well as any upgrades that might be required as a result of future project expansion (e.g. additional local data and/or the inclusion of data from neighboring and Sacramento Valley regions). It is intended and anticipated that a variety of user groups – ranging from the general public (consumer) to professional GIS users (consumer and contributor) – will routinely

access and query available data. An appropriate user interface is needed to meet various needs and levels of familiarity/expertise interacting with GIS data.

Deliverables:

- a. Benchmark best practices and provide hardware and software recommendations based on affordability, flexibility, and compatibility with other such system in California and the GIS industry.
- b. Provide descriptions and demonstrations of how the data would be searched for, quickly viewed for suitability, accessed within typical application software and data viewers, and possibly linked to other online services such as ESRI's ArcGIS Online, Google Maps/Earth, etc.
- c. Develop data back-up and recovery plan.

Task 3

Long-term Funding Outlook

Critical to the proposed Shasta County Regional GIS Platform is a long-term funding source. New funding sources stemming from recent climate change legislation have been identified as the primary and most likely option. Consultant shall explore and evaluate climate change related funding sources, plus any potential local contributions (in-kind and financial), applicable grant programs, and other opportunities that might be obtained for implementation and ongoing maintenance.

Deliverables:

- a. Assessment of existing and long-term funding sources.
- b. Financially constrained project implementation strategy, including major project phases with accompanying tasks, responsibilities, and funding requirements.

Task 4

Final Report & Presentation

Consultant shall assemble all findings and recommendations into a single report and present to the SCRTPA Board.

Deliverables:

- a. Shasta Regional GIS Platform Feasibility Study: Final Report & Recommendations.
- b. Presentation to SCRTPA Board

Services to be provided by the SCRTPA

It is the SCRTPA's practice to approach such efforts as a project partner and to be actively involved in all of its elements. For the purpose of preparing a proposal, however, proposer should not assume that any services will be provided by the SCRTPA beyond that of an assigned project manager, organization of a technical advisory committee, and assistance gaining access to local GIS data resources.

The SCRTPA will arrange a meeting with the selected consultant to discuss any addition, expansion, or modification to the scope of work (see Task A). Proposals shall otherwise account for all necessary services and resources required to fully carry out the agreed upon scope of work.

Compensation

The SCRTPA will negotiate an agreement with the selected consultant based on the consultant's fee proposal and other considerations as outlined under Task A.

For all services rendered in association with the provided scope of work, consultant may submit monthly invoices on a reimbursement basis for labor and direct expenses. All administrative and overhead costs shall be incorporated into agreed upon hourly billing rates. SCRTPA reserves the right to authorize scope of work in pieces in order to control project budget and maintain quality control over the duration of the project.

See 'Contents of Fee Proposal' for additional details.

Project Schedule

The following dates will be adhered to:

October 30, 2009	Release RFP
November 13, 2009	All questions due to RTPA
November 20, 2009	SCRTPA response to all questions (provided upon request)
January 8, 2010	Proposal Due Date (by 5:00 PM)
January 20, 2010	Notification of intent-to-award and arrangements made for Internal Kick-off Meeting (Task A)

It is anticipated that a formal contract agreement will be executed by the SCRTPA Board on February 23, 2010. Following a written notice-to-proceed, the Consultant shall begin work within 7 days or as directed otherwise. All deliverables, excluding presentation of final report and recommendations to the SCRTPA Board, shall be completed no later than August 31, 2010, or as otherwise agreed upon as a result of Task A.

Proposal Requirements

Interested firms are invited to submit four (4) hard-copy proposals and one (1) electronic pdf version on compact disk to the following address:

Shasta County RTPA
Attention: Daniel Wayne, Senior Planner
1855 Placer St.
Redding, CA 96001

Note: all proposals must be received no later than 5:00 pm on January 8, 2010.

Contents of the Technical Proposal

Proposals should contain all information provided below and should not exceed fifteen pages (excluding attachments).

- Firm Background – Provide an overview of your firm's history, qualifications, capabilities, and experience related to the proposal, highlighting any experience working within the North State. If applicable, also identify and provide a brief overview of all proposed sub-consultants.
- Project Team & Manager – Provide an organizational chart identifying all individuals (including sub-consultants, if applicable) assigned to and responsible for the key elements of

the scope of work. Indicate the number of hours that each member has been budgeted and will be assigned to the project.

Note: Please include a letter authored by the proposed project manager expressing their personal interest in the project and how his/her knowledge and skills – beyond the requisite technical expertise – will add value and may help expand regional support needed for successful project implementation.

- Individual Qualifications and Experience – Provide resumes for each key staff member. Also provide references for individuals able to vouch for at least three recent related projects (completed or ongoing). For each project, provide a brief description of the contracted scope of work; contracted budget and completion date; name of the consultant's project manager; and the name, title and phone number of a client reference.
- Statement of Understanding – Describe your understanding of the overall project, the scope of work, and the SCRTPA's short and long-term objectives. Highlight the major project steps and outline your approach toward addressing each element.

Optional: consultant may recommend added, expanded, or modified tasks separately. Explain how proposed tasks may improve the quality and comprehensiveness of deliverables and/or improve the likelihood of project implementation. See *Contents of Fee Proposal* and *Selection Criteria & Process* sections for limitations and additional details.

- Schedule – Include a project schedule showing milestones, deliverable dates, and the duration of each task.

Contents of the Fee Proposal

A fee proposal should include all fees and expenses needed to complete the scope of work. Sufficient information should be provided to justify the proposed fee and to serve as a basis for negotiating a contract. In this regard, the fee proposal should identify key personnel; estimated number of hours and billing rates; direct expense fees; and any outside costs required to complete each work task.

Consultant fee proposal shall be presented in two parts:

Part I (Required): Consultant shall propose fees and expenses not to exceed \$55,000 for all tasks listed within this RFP. Fee proposal must include a 10% contingency line item for unexpected related or expanded works tasks as authorized by the SCRTPA (e.g. \$50,000 maximum budget for specified scope of work plus up to \$5,000 contingency line item).

Part II (Optional): For RTPA consideration, consultant may recommend additional, expanded, or modified work tasks. Part II fees and expenses shall not exceed an additional \$10,000. Combined total of Part I and Part II shall not exceed \$65,000. Consultant shall explain how proposed additional, expanded, or modified tasks may improve the quality and comprehensiveness of deliverables and/or improve the likelihood of project implementation.

Selection Criteria & Process

The SCRTPA's proposal evaluation process will adhere to the following criteria and weighting:

- Understanding of the Required Services (10 points) – Responsiveness to this Request for Proposals – including clarity, organization, attention to detail, and effectiveness of the approach – will be the first line of review. Proposals that provide a focused and concise response to the SCRTPA's needs will be considered favorably.

Recommendations for adding, expanding, or modifying the provided scope of work, if provided, must be listed separately. Proposals will not be penalized for omitting such recommendations, but may be viewed favorably if this feedback is determined to add depth and/or value to the overall project.

- Experience and Qualifications (10 points) – Demonstrated capabilities and technical expertise of the project manager, assigned project team. Also, the depth and reserves of knowledge and expertise within the firm (and sub-consultant(s) if applicable) needed to complete the work independently.
- References (10 points) – Positive evaluations from past projects similar in scope.
- Value (5 points) – Reasonableness of fees relative to the level of effort outlined in the proposal.

Depending on the results of the selection panel review, a short-list of qualified and responsive consultants may be requested to participate in an interview. No interviews will be held if the results of the selection panel review are unambiguous.

Contract Conditions

The selected consultant will be required to sign a standard SCRTPA contract and maintain required insurance coverage. Professional liability insurance will be required in the minimum amount of \$1,000,000. Unless indicated otherwise, submission of a proposal indicates that the proposer accepts the terms of the standard agreement (see attached).

City of Shasta Lake

P.O. Box 777 • 1650 Stanton Drive
Shasta Lake, CA 96019
Phone: 530.275.7460
Fax: 530.275.7406
Website: ci.shasta-lake.ca.us



October 7, 2009

Daniel Wayne, Senior Planner

Shasta County Regional Transportation Planning Agency
1855 Placer Street
Redding, CA 96001

Re: Shasta Regional GIS Platform

Dear Mr. Wayne:

It is my understanding that Shasta County Regional Transportation Planning Agency (RTPA) received a grant to study the feasibility of a Shasta Regional GIS Platform, which would include development of a central location to merge, store, access, and manage GIS data from across the region. The City of Shasta Lake is committed to regional planning efforts and supports the Shasta Regional GIS Platform project.

Although the City of Shasta Lake received a Community Development Block Grant to develop a GIS system for our City, we currently have no staff assigned to maintain and update the system. Our City recognizes that one of the greatest obstacles to local and regional planning is the lack of complete, standardized, and consolidated GIS data for the region. A centralized location for sharing and exchanging GIS data will improve the efficiency, accuracy, and effectiveness of local and regional planning efforts as the County continues to grow, especially in light of new planning requirements, including analysis of greenhouse gas emissions related to land use development.

More specifically, the integration and accessibility of region-wide GIS data in one location includes the following tangible benefits:

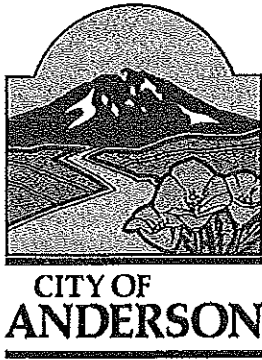
- Improved productivity and reduced staff time obtaining GIS data from one location;
- Assurance that the data acquired is the most current and the best available;
- Efficient access and application of GIS due to data standardization;
- Improved collaboration between local agencies, private sector GIS firms, and educational institutions; and
- Increased opportunity and likelihood of data development grant opportunities.

The City of Shasta Lake looks forward to participating in the Shasta Regional GIS Platform project, including the development of regional data standards, identification of best strategies, and eventual project implementation.

Sincerely,

Gracious A. Palmer
Mayor

c: Carol Martin, City Manager
Carla L. Thompson, AICP, Development Services Director
Debbie Israel Messer, Senior Planner
Jeff Tedder, City Engineer
Jim Grabow, Public Works Director
Jessaca Lugo, Program Manager
Loree Byzick, Program Manager



October 6, 2009

Daniel Wayne, Senior Planner
Shasta County Regional Transportation Planning Agency
1855 Placer Street
Redding, CA 96001

Re: Shasta Regional GIS Platform

Dear Mr. Wayne:

On behalf of the City of Anderson, please accept our support for the 'Shasta Regional GIS Platform'. One of the greatest obstacles to local and regional planning is the lack of complete, standardized, and consolidated GIS data for the region. City of Anderson has no dedicated in-house GIS department or staff.

As the Shasta County region continues to grow and as new planning requirements are added to our plate, a centralized location for sharing and exchanging GIS data will improve the efficiency, accuracy, and effectiveness of local and regional planning efforts.

More specifically, the integration and accessibility of region-wide GIS data in one location includes the following tangible benefits:

- Improved efficiency/reduced staff time obtaining GIS data in one location;
- Knowing that the data acquired is the most current and the best available data source;
- Speedy access and application of GIS due to data standardization;
- Improved collaboration between local agencies, private sector GIS firms, and educational institutions; and
- Increased opportunity and likelihood of data development grant opportunities.

Anderson looks forward to being an active participant in the process, including the development of regional data standards, identifying best strategies, and eventual project implementation.

Sincerely,

John Stokes
Planning Director
City of Anderson

September 10, 2009

Daniel Wayne
Senior Planner
Shasta County Regional Transportation Planning Agency
1855 Placer St.
Redding, CA 96001-1759

Re: Regional GIS Platform

Dan,

The City of Redding GIS Division fully supports the development of a regional GIS platform and feels it is a worthwhile endeavor for our agency and the greater north state area.

We currently spend staff time gathering data for regional maps and analysis. The sources are not always easy to find and the data formats vary in types, projections, and currency. The development of storage, standardization, and downloadable data for the north state is huge for our workload, especially during this time of limited resources/staffing.

Having regional data available has very tangible savings to this agency, including but not limited to the following benefits:

- Time savings in finding local data stored in one place instead of searching the internet and making multiple calls to other agencies/organizations;
- Knowing that needed data is the most current and from the best available source; and
- Ability to quickly access and utilize the data because it is standardized and always in a consistent format.

Regional collaboration of GIS data benefits us all. What can The City of Redding GIS Division do to help this project move forward?

Best regards,

Rob Santry
GIS Manager
City of Redding
rsantry@ci.redding.ca.us



SHASTA COUNTY

INFORMATION TECHNOLOGY DEPARTMENT

Charles Haase, Chief Technology Officer

Karen Anne Houghton, Deputy Director
Thomas Schreiber, Deputy Director

1450 Court Street, Suite 124
Redding, CA 96001-1656
Phone: 530-225-5273
Fax: 530-225-5275
California Relay Service at:
711 or 800-735-2922

Daniel Wayne, Senior Planner
Shasta County Regional Transportation Planning Agency
1855 Placer Street
Redding, CA 96001

October 12, 2009

Re: Shasta Regional GIS Platform

Dear Mr. Wayne,

As the IT Supervisor assigned to GIS for Shasta County, I support the 'Shasta Regional GIS Platform' concept. One of the greatest obstacles to local and regional planning is the lack of complete, standardized, and consolidated GIS data for the region.

As a representative on the Far North Regional GIS Council I have taken an active role in supporting the Shasta Regional GIS Platform concept by participation in the "Request For Proposal" development meetings to discuss platform development, hardware/software/user interfaces, and GIS data acquisition and management.

As the Shasta County region continues to grow and as new planning requirements are added to our plate, a centralized location for sharing and exchanging GIS data will improve the efficiency, accuracy, and effectiveness of local/regional planning efforts and project-by-project analysis.

More specifically, the integration and accessibility of region-wide GIS data in one location includes the following tangible benefits:

- Improved efficiency/reduced staff time obtaining GIS data in one location;
- Speedy access and application of GIS due to data standardization;
- Improved collaboration between local agencies, private sector GIS firms, and educational institutions; and
- Increased opportunity and likelihood of data development grant opportunities.

Results of the Shasta Regional GIS Platform will aid Shasta County in developing or accomplishing a variety of efforts, including sharing data with the City of Redding and other Counties within the northern California region. I welcome this invitation to be an active participant in the process, including the development of regional data standards, identifying best strategies, and eventual project implementation.

Sincerely,

Dave Powers, IT Supervisor – GIS
Shasta County Information Technology
1450 Court Street, Suite 124
Redding, CA 96001

September 16, 2009

Daniel Wayne
Senior Planner
Shasta County Regional Transportation Planning Agency
1855 Placer St.
Redding, CA 96001-1759

Re: Regional GIS Platform

Dan,

The Far North Regional GIS Council which comprises of GIS professionals from many agencies, state, federal, and local fully supports the development of a regional GIS platform and feels it is a worthwhile endeavor for the greater north state area. It actually has been a goal of ours for several years.

As individuals we currently spend considerable time gathering data for regional maps and analysis. The sources are not always easy to find and the data formats vary in types, projections, and currency. The development of storage, standardization, and downloadable data for the north state is huge for our workload, especially during this time of limited resources/staffing.

Having regional data available has very tangible savings to this agency, including but not limited to the following benefits:

- Time savings in finding local data stored in one place instead of searching the internet and making multiple calls to other agencies/organizations;
- Knowing that needed data is the most current and from the best available source; and
- Ability to quickly access and utilize the data because it is standardized and always in a consistent format.

Regional collaboration of GIS data benefits us all. What can the FNRGC do to help this project move forward?

Best regards,



Terri Webster, GISP
Far North Regional GIS Council, chair
777 Cypress Ave, Redding, CA 96001
(530) 224-4337

<http://r1.dfg.ca.gov/portal/fnrge>



OFFICE OF THE STATE CHIEF INFORMATION OFFICER

Teri Takai
California Chief Information Officer

September 18, 2009

Daniel Wayne, Senior Planner
Shasta County Regional Transportation Planning Agency
1855 Placer St.
Redding, CA 96001-1759

Re: Regional GIS Platform

Dear Dan,

The Office of the State Chief Information Officer (OCIO) fully supports the development of a regional GIS platform and feels it is a worthwhile endeavor for the OCIO and the greater north state area.

We currently spend staff time gathering data for regional maps and analysis. The sources are not always easy to find and the data formats vary in types, projections, and currency. The development of storage, standardization, and downloadable data for the north state is huge for our workload, especially during this time of limited resources/staffing.

Having regional data available has very tangible savings to the OCIO, including, but not limited to, the following benefits:

- Time savings in finding local data stored in one place instead of searching the internet and making multiple calls to other agencies/organizations;
- Knowing that needed data is the most current and from the best available source; and
- Ability to quickly access and utilize the data because it is standardized and always in a consistent format.

Regional collaboration of GIS data benefits us all. What can I do to help this project move forward?

Best regards,

A handwritten signature in black ink, appearing to read "Michael Byrne".

Michael Byrne
Deputy Director - Geographic Information Officer

September 14, 2009

Daniel Wayne
Senior Planner
Shasta County Regional Transportation Planning Agency
1855 Placer St.
Redding, CA 96001-1759

Re: Regional GIS Platform

Mr. Wayne,

My agency, California Department of Transportation, Office of Roadside Maintenance, fully supports the development of a regional GIS platform and feels it is a worthwhile endeavor for our agency and the greater north state area.

We currently spend staff time gathering data for regional maps and analysis. The states GIS data library does not always have the data we need for our own analysis. Internet sources are not always easy to find and are very time consuming. The development of storage, standardization, and downloadable data for the north state is huge for our workload, especially during this time of limited resources/staffing.

Having regional data available has very tangible savings to this agency, including but not limited to the following benefits:

- Time savings in finding local data stored in one place instead of searching the internet and making multiple calls to other agencies/organizations;
- Knowing that needed data is the most current and from the best available source; and
- Ability to quickly access and utilize the data because it is standardized and always in a consistent format.

Regional collaboration of GIS data benefits us all. Please let me know how Caltrans can help this project move forward.

Best regards,



Kathy Heath
kathy_heath@dot.ca.gov
(530)225-3561
(530)225-3435 fax
1657 Riverside Dr
Redding Ca, 96001



Shasta College

Shasta-Tehama-Trinity Joint Community College District
11555 Old Oregon Trail • P.O. Box 496006 • Redding, CA 96049-6006
Phone: (530) 242-7500 • Fax: (530) 225-4990
www.shastacollege.edu

June 2, 2009

Dan Wayne
Senior Planner
Shasta County RTPA
1855 Placer Street
Redding CA 96001

Dear Mr. Wayne:

This letter is to express Shasta College's commitment to supporting the Regional Transportation Planning Authority's long-range regional planning efforts. This is in keeping with Shasta College's strategic goal of sustainability, which is the subject of a number of programs and initiatives at the College. In the near term, we would like to offer support to RTPA's initiative to develop regional GIS data for planning and regional collaboration.

The Shasta College Foundation is spearheading efforts to expand sustainability of our Redding campus. These include sponsorship of the recent Sustainability Conference, along with monitoring and restoration of Stillwater Creek. Reducing Shasta College's 'carbon footprint' is a central unifying goal of these efforts.

Shasta College's Economic and Workforce Development (EWD) Division has also engaged in a concerted effort in sustainability with the establishment of unit-based renewable energy programs and numerous community based courses and programs related to renewable and other components of sustainability. A primary initiative of EWD is the continued strengthening and development of effective working relationships with the District's various community partners. This collaborative spirit has allowed a greater positive impact on the development of the local workforce and the measurable enhancement of the economic well being of the communities served.

Shasta College's GIS Program is a workforce-directed program that can provide interns and technicians in support of GIS data development. Current collaboration with local GIS firms, the California Industry Driven Regional Collaboratives program, and California State University, Chico are among the efforts that demonstrate our GIS capacity. Furthermore, our Information Technology Department may offer support to data storage and efforts.

Governing Board Members

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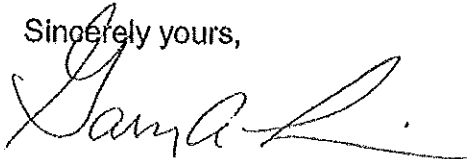
Shasta County RTPA

June 2, 2009

Page 2

Please let us know how we can support the RTPA's efforts as you move ahead developing your plans and strategies.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Gary A. Lewis". The signature is fluid and cursive, with a large initial "G" and a long horizontal stroke at the end.

Gary A. Lewis
District Superintendent/President

GAL:smv

c: Bill Cochran, Vice President of Academic Affairs
Dan Scollon, GIS Instructor
Brad Banghart, Dean of Economic and Workforce Development



1400 K Street, Suite 400 • Sacramento, California 95814
Phone: 916.658.8200 Fax: 916.658.8240
www.cacities.org

To: California City Officials
From: Bill Higgins
Legislative Representative & Sr. Staff Attorney
Date: October 10, 2009
RE: Abridged Summary of RTAC Report

I. ABOUT THIS DOCUMENT

This is an abridged summary of the recommendations of the Regional Targets Advisory Committee (Committee). The Committee was created by SB 375 to advise the state Air Resources Board (ARB) on how to set targets for greenhouse gas (GhG) emissions for passenger vehicles. This summary is an attempt to make the report more understandable to local officials and their staff who do not have time to go through the whole report.

Whenever possible, the actual words of the Committee's report have been used. But a note of caution: this summary includes significant editing, restructuring, and paraphrasing with the intent to capture the Committee's intent with simpler words. Nevertheless, it may unintentionally lead the reader to draw conclusions that are different than those in the actual report. Those who want the details should read the actual Committee report.

II. RECOMMENDATIONS FOR A STATEWIDE TARGET

This section summarizes the elements of the Committee's report that most directly relate to how ARB should set targets. One change is that this summary pulls out the Seven Step Process for collaboration between ARB and the metropolitan planning organizations (MPOs) for setting regional targets and places it in Section III of this summary.

A. Statewide Per Capita Metric

The Committee recommends that ARB express the targets uniformly as a statewide per capita reduction in GhG emissions from 2005 levels. This means that emissions in 2020 and 2035 should be a certain percentage below the per capita emissions in 2005 (for example: X percent reduction in GhG per household). The Committee recommends that ARB use a Seven Step Process (described in Part III of this summary) with the MPOs to set the target, which could be adjusted up or down to respond to regional differences. Any adjustment would be subject to a "reasonably tough test."

The per capita metric is preferred for its simplicity. It is easily understood and can be developed with current data. It will also account for growth rate differences between regions and ensures that both fast and slow growth regions can take advantage of new

and established transit and infill sites in different ways. The 2005 base year allows regions that have already realized reduced emissions some credit from their early actions.

Looking forward, ARB should use a consistent methodology to set the 2020 and 2035 targets. Transportation and pricing strategies may yield considerable results in the near-term, while improved land use planning may achieve its most significant benefits over the long-term. Therefore, the factors considered for the 2020 target may be different than those considered for 2035. But the methodology for both targets should be consistent.

B. The Goal: Ambitious Achievable Targets

The resolution that accompanied ARB's adoption of the Scoping Plan stated that the Committee should develop a process that would yield "ambitious achievable" targets. The Committee struggled to determine what this meant in practice, but concluded that attainment of the targets should require efforts well beyond "business as usual." While it would be preferable if most MPOs could meet their targets in a sustainable communities strategy (SCS), the targets should not be set low simply to allow MPOs to achieve the target this way. Regions should do everything feasible to reduce GhG emissions. Regions that use an alternative planning strategy (APS) must also include all feasible measures within the SCS to reduce GhG emissions from cars and light trucks.

The Committee also stated that the federal fiscal constraint requirements should not become a barrier to setting the target. However, the major factors that are considered by the federal planning process—such as assumption about economic conditions, funding levels, and other key factors—must be accounted for in the development of the SCS. Ultimately, the Committee believed that the iterative scenario modeling that will be used in seven step target setting process (see Part III of this summary) will help flesh out this issue and define the upper ranges of achievable GhG reductions.

C. Accounting for Current Economic Conditions

Current economic trends have impaired the ability of the state to provide reliable funding for community planning and infrastructure. Moreover, the state budget has severely cut resources for transit services and redevelopment. These resources are essential to support sustainable development by local governments and transit agencies. The Committee is sensitive to the need for the current and future economic trends to be taken into account in determining what is actually achievable. However, the Committee was also confident that the forecasting methods currently required in the regional transportation plan (RTP) process will reflect changes in the economy, and account for economic fluctuations over time. Thus, the impact of the recent recession and economic restructuring will be reflected as these forecasts are updated for regional plans developed under SB 375.

D. Public Process is Vital

ARB should implement a robust public outreach and education effort during target development phase. Ensuring the trust of the public and establishing a system of transparency, public participation, and collaboration will strengthen the target setting process. Opportunities for broad stakeholder participation—including representatives of

local governments; air districts; transportation agencies; homebuilders; academia and environmental, planning, affordable housing, public health, labor, and environmental justice organizations—are essential. The public education effort should put forward a positive image of integrated planning, explain the changes Assembly Bill 32 and Senate Bill 375 have created, elicit input on proposed regional strategies and scenarios, and increase public awareness of co-benefits of greenhouse gas reduction strategies. (Pages 38 to 40 of the Committee's Report lists broad suggestions on message development, media, and interests groups and stakeholders to be contacted).

E. Other Factors Affecting the Target Setting Process

The Committee also made several additional recommendations:

- *Interregional Trips.* Trips can start in one region and end in another, pass through a region, or even involve interstate travel. Generally, MPOs should take responsibility for half of an interregional trip that starts or ends in their region, but should not be responsible for through trips or international travel.
- *Accounting for Fuel and Vehicle Technology.* SB 375 requires ARB to account for improved vehicle emission standards, changes in the carbon-intensity of fuels, and future measures to reduce greenhouse gas emissions from these sources when setting the targets. The Committee recommends that ARB provide MPOs this information to enable the MPOs to account for these benefits consistently.
- *State Agency Conflicts.* ARB should work closely with the California Transportation Commission, Caltrans, Department of Housing and Community Development and the Governors Office of Planning and Research, and other state agencies to avoid conflicts with other state goals and priorities.

F. Looking Forward: Performance Monitoring and Model Enhancements

SB 375 requires ARB to update regional targets every eight years or every four years if significant changes to other measures would affect emission levels. The Committee considered how ARB should monitor implementation of regional strategies and what new tools should be available and to inform the next round of target setting.

For monitoring the implementation of regional strategies within the SCS or APS, ARB should, in consultation with the MPOs in a public process, identify a standard set of performance indicators that are easily understood and represent the most effective, available means for measuring the effects of MPO policies. The Committee discussed tracking vehicle miles travelled (VMT) and fuel usage as two means to verify changes in vehicle use. Indicators for various policy areas (state support, land use, transportation, and transportation demand measures) are listed on page 45 of the Committee's Report.

In terms of developing improved capabilities, the current models and estimating tools should be improved for the next rounds of target setting. Improvements should be made

to activity-based, integrated land use, and economic models that go beyond traditional transportation demand models.

The Committee also recommends that state should support the Caltrans efforts to enhance statewide household travel surveys, model for interregional trips and goods movements, as well as develop a statewide integrated econometric land use and transportation model. The state and regions should also seek better data to incorporate housing affordability and social equity in their models; improve the ability to estimate energy efficiency and other less direct reductions that result from regional strategies; and develop a program to gather regional fuel purchase and annual VMT data (odometer readings at vehicle registration).

II RECCOMENDATIONS FOR DETERMINING ACCURACY OF REGIONAL METHODOLOGIES FOR GhG REDUCTIONS

This section collects the elements of the Committee's report that relate to how ARB and the regions will determine how specific strategies will result in GhG emission reductions.

A. Regional Variance and Flexibility

The Committee recommends that ARB use all information at its disposal in setting the regional targets. However, the capability of each MPO to accurately project GhG emissions differs widely. For instance, the larger regions employ advanced modeling tools with more sophisticated techniques to estimate the impacts of specific strategies. ARB should expect that these regions would rely heavily on modeled outputs and scenarios. Conversely, smaller regions with less sophisticated modeling tools may need to rely on best management practices (see subpart C below) to estimate the impacts. This regional variation should be taken into account.

The Committee also recommends that MPOs retain the flexibility to incorporate relevant and innovative measures to meet targets appropriate to the region's unique characteristics. For example, it would be appropriate for MPOs to use, with sufficient documentation, transportation sector GhG reductions that are not on the BMP list, or go beyond the benefits from state actions to meet their target and receive credit for local/regional innovation. But GhG reductions that do not come from passenger vehicle usage should not be credited towards meeting of targets.

Success is more likely when each region develops strategies that work within the context of regional demographics, economic development, market preferences, infrastructure, growth, and the built environment. The Regional Blueprint Planning Program is an example of such flexibility. This approach respects local land use decision-making and it will be critical for the local governments to "buy-in."

Finally, The Committee expects that the science and data related to land use and transportation planning will evolve rapidly. As a result, the tools and information ARB will have for setting targets by September 2010 may be different from those that will be available to individual MPOs when they demonstrate how they will meet their targets. It

is crucial to design a process that can reconcile these differences and apply new tools and data to the next regular RTP update process.

B Identification of Underlying Assumptions

The MPOs and ARB should identify the underlying assumptions—such as population estimates, funding availability, and other assumptions—included in the targets and methodologies to achieve the targets.

In addition, ARB and MPOs should identify a list of statewide assumptions that would be used to equalize the effects of adopted strategies between regions. For example, MPOs currently use different figures for fuel price. But if all regional models used the same fuel price, no single region would be gain an unfair advantage to the extent that a low or high fuel price influenced the ability to achieve a target. Other statewide assumptions include auto operating costs, fleet mix, fleet fuel efficiency, expected federal and state revenues, demographic forecasts, and assumptions about goods movement.

C Use of Travel Demand Models and Other Modeling Tools

The Committee recommends using existing travel demand and other models to estimate GhG emissions to the extent that each MPO's model is capable. Models can simulate the complex interaction of demographics, land use, development patterns, transportation, and other policy factors. A rigorously tested travel demand model with well-documented expert peer review will add to the credibility of GhG estimates.

The models used by the 18 MPOs vary in their capabilities. Accordingly, MPOs should conduct sensitivity testing on their models on all external variables (such as age, income, automobile operating costs), and for as many policy variables as are feasible (such as transit fares, highway capacity, density, mix of use, pedestrian use, and transit proximity). Depending on the factor or policy, the recommended assessment may include:

- Validation statistics showing the correspondence of the model prediction for a validation (test) year to empirical data.
- Results of experimental sensitivity tests (where a single variable is adjusted higher and lower from its baseline value, with the corresponding changes in model output variables shown). Minimally, the outputs shown would be: total VMT; light-duty vehicle VMT total and per capita; light-duty vehicle GhG emissions total and per capita; total person trips; person trips by automobile modes; person trips by transit modes; and person trips by bike and walk modes.
- Results of planning scenario tests, wherein the modeled results of planning scenarios are tabulated and correlated to show the overall sensitivity of the travel demand model to a combination of factors and policies included in the planning scenario.
- The documentation and assessment process should allow for incorporation of social equity factors such as housing and transportation affordability, displacement, and jobs-housing fit to the extent that methodologies exist

The assessment and documentation should also identify areas where the model lacks capacity and where the model sensitivities fall outside the range of results documented in research literature. Ideally, the range of reasonable sensitivity to key factors and policy variables should be determined through a coordinated research synthesis and review process, the results of which would be a standard reference for all MPOs in the state.

Given the varying capabilities of the MPO models, some MPOs may need to augment their models. There are at two least ways in which this could be accomplished. The first is by incorporating practices from the BMP list described in the next section. The second way is through the use of a “post processor tool” that makes appropriate adjustments to a travel demand model to account for areas where the model lacks sensitivity.

These methods should rely on model outputs for all factors where the model can be shown to be reasonably sensitive. If a capacity is represented in a model, but model sensitivity is not reasonable, the method augmenting the result should be tailored to compensate for the insensitivity. If the capacity to model a factor is absent, another method should be implemented to provide the needed capacity. However, where any other method is used, the MPO must demonstrate a reasonable approach for ensuring that the other method does not double-count or over-estimate the likely impacts.

Finally, there is a long-term need to generally improve the models used throughout the state. Thus, each MPO should develop an improvement program to propose changes, document needs, and determine order of magnitude costs of the needed changes. The program should also describe how the region will address factors relating to housing affordability, social equity, and the measurement of the co-benefits listed on pages 42 to 44 of the Committee Report by the second round of SCS development. Since model improvement is a long term objective, MPOs should also refer to the RTP Guidelines as updated by the CTC in response to the requirements of SB 375.

D. Use of Best Management Practices

ARB should create an initial list of Best Management Practices (BMPs) expected to reduce GhG emissions within the next four to six months so that it can be used in the target setting process. The list should be developed in consulting with experts, MPOs, current literature, local jurisdictions, and the public. The list should not be exclusive; regions may still incorporate other practices if emission reductions can be demonstrated.

The BMP list will serve several purposes. It will assist ARB in target setting, help local and regional governments develop GhG reduction strategies, and provide a user-friendly tool to facilitate public interaction. The BMP list will also assist ARB in evaluating strategies developed by the MPOs and in the case of small MPOs (at least in the near term), may be the sole method to demonstrate compliance with the targets.

Once created, the BMP list should be converted into an analytical spreadsheet tool that could estimate reductions from a specific strategy or set of strategies in a particular setting. This would allow regions and local jurisdictions to make GhG reduction policy

choices based on available research while more sophisticated models are being developed. The BMP list and spreadsheet tool should only include those policies for which empirical studies or travel models exist to estimate the likely impacts (in terms of VMT and GhG reductions) of their implementation. The BMP spreadsheet tool should be a “single spreadsheet tool” with the following characteristics:

- Compatible with existing models
- Account for significant regional differences
- Account for interactions (positive and negative effects) of multiple BMPs
- Capability to analyze projects on a regional, local, and project level
- Capability to address a range of conditions across all MPOs and all communities
- Provide ability for users to provide other information about the area being analyzed, such as whether the area is rural, urban, or suburban; employment density in urban core; estimated share of work trips made by automobile; or total seat-hours of transit service per weekday per capita.

The effectiveness of the policies would be determined by data from empirical studies and modeling results. Expert consultants should review the literature and derive the most region-appropriate elasticity values possible, including any interaction between the various factors. Prerequisite conditions and interdependencies, such as financial and resource constraints, consistency with federal air quality regulations, fuel prices, and information from peer reviewed publications, should also be taken into account.

The Committee fully supports the ongoing use of the BMP list and spreadsheet tool as they evolve to address new data and information. In the short term, BMPs will be used in multiple roles, particularly as integrated land use and transportation models and input data quality are being developed and improved. Over time, reliance on these BMP tools will likely find the highest value as a communication tool to help discuss greenhouse gas reduction strategies with the public and local governments in a transparent and clear way, and as screening tools for local and regional scenario development and decision making.

E. Expert Consultation & Use of Empirical Data

ARB should work with a group of technical experts and land use and transportation practitioners throughout the process. Initially, these experts would help develop the BMP list and identify the range of possible GhG benefits and co-benefits of the BMPs. They would also derive elasticity values for each practice from empirical evidence, appropriate to each region, and help create anticipated sensitivities to each regional model.

The experts should also review the analytical tools that use the empirical data associated with the BMP list of policies and practices. This may include the BMP spreadsheet tool, other sketch tools, or model improvements that are validated against the empirical data.

This review would ensure that the analytical tools appropriately reflect the impacts suggested by the data and identify future research needs.

ARB should also incorporate empirical data and values into its target setting and strategy review process. Empirical studies provide important data of actual travel behavior. When combined with information about transportation infrastructure investments, pricing, and other policy decisions, empirical data can be used to derive elasticity values and define the range of VMT reductions that can be expected from a particular policy change.

Elasticity is a percentage change in one variable with respect to a one percent change in another variable, such as the percentage change in VMT for each percent change in development density. MPOs can use these elasticities to better understand the effects of policy or investment changes. However, empirical studies must be used with caution, as it is critical to include all important variables in the empirical relationships.

The relevant empirical evidence consists of cause-and-effect relationships. The “causes” or inputs include land use strategies such as infill development, development mix, density, urban design (also known as the “4Ds”), affordable housing development, transportation strategies such as pricing, incentives, new transit service, new roadway investments, operational improvements, and other forms of transportation demand management (TDM). The observed “effects” or outputs are changes in transportation system use over time, measured through empirical data that includes local, regional and state road and highway traffic counts, smog check odometer readings, transit ridership counts, household travel surveys, gasoline consumption data, bridge toll data, and counts of bicycle and pedestrian activity. Fortunately, the scientific literature on this issue is sufficient to give the group of experts existing work from which it can draw conclusions.

Finally, given that all MPOs employ travel demand models that will provide data on the GhG emissions associated with the regional strategies, ARB should consult with land use and transportation modeling experts during its review of the MPOs’ analyses. These experts would work with MPOs to determine that the models are generating the right answers, given the expected values. Observations of actual behavior responses to transportation investments should continually be used to refine and recalibrate models and advise on the elasticities that should be associated with each practice. This input is critical to supplement ARB’s existing technical capabilities and aid ARB in meeting its statutory obligation to determine the accuracy of the MPOs’ emission reduction estimate.

F. Co-Benefits of Regional GhG Reduction Strategies

In addition to GhG reduction, many other advantages can result in areas that are designed for and supported by a range of transportation options, including increased mobility, economic benefits, reduced pollution, and healthier, more equitable communities. MPOs should quantify, to the extent possible, these co-benefits throughout the SB 375 target setting and implementation processes. The report lists a number of co-benefits related to increased mobility, economic opportunities, reduced air and water pollution, land and open space conservation, and public health (see pages 42 to 44 of the Committee Report).

G. Housing and Social Equity

Housing affordability, transportation costs, and access to employment can affect GhG emission levels by influencing where people live and how they travel. At a minimum, target setting should work in concert with state housing element law and avoid facilitating any adverse consequences. In addition, social equity policies that have the potential to reduce GhGs (such as appropriately located affordable housing) must be included on the BMP list.

In addition, ARB should ensure completion of research and model development so that social equity factors are fully incorporated into the modeling for the second SCS and before any adjustments to the targets. Adverse social consequences of changing land use patterns, such as displacement, gentrification, and increased housing costs should also be avoided or mitigated to the extent possible in the planning scenarios submitted by MPOs. Finally, ARB should encourage the MPOs to develop “visioning” tools that enable the public to clearly see the social equity impacts—such as air quality, transit access, household costs and housing supply—of various planning scenarios.

H. Accounting for Local Constraints and Opportunities

SB 375 provides that “local governments need a sustainable source of funding to be able to accommodate patterns of growth consistent with the state’s climate, air quality, and energy conservation goals.” SB 375 is not a “no growth” bill. The most frequently cited barrier to successful SB 375 implementation were cuts to public transit funding and redevelopment, and the lack of funds for jurisdictions to create new community-based plans, change zoning, and do programmatic environmental reviews.

The Committee identified the need for supportive action by the State and federal government and discussed new local government authorities to aid implementation:

- *Incentives for Exceeding the Target.* Finding ways to make it easier, better, and more rewarding to implement GhG reducing strategies will increase the chance for success. Recognition programs (like LEED), regulatory relief (like CEQA relief in SB 375), grants from future cap and trade revenues, discretionary awards, technical assistance, financial assistance for specific programs, and rewards for collaborative planning (potential funding from Strategic Growth Council) should be considered.
- *State Actions.* The State should consider funding the programs necessary for local and regional governments to actually implement the set of regional strategies adopted in an SCS or APS. These include: state transit funding, local transportation system funding, redevelopment funding, planning funding, affordable housing funding, and other sources for statewide data collection.
- *Federal Transportation Policies.* The Committee also notes that two pieces of federal legislation—a climate bill and the re-authorization of the six-year transportation

spending bill—present opportunities to encourage improved land use planning to meet climate goals nationwide.

Planning monies are needed for general plan updates compatible with a new SCS. Conservation monies should be targeted to jurisdictions that have policies to protect resource areas. Transportation revenues for expansion and capital improvements should be targeted to those cities and counties with general plans and programs that are consistent with plans that achieve the targets.

Additional input on costs will come forward as SB 375 is implemented. The state should work with the MPOs and local governments to identify those costs, as well as new funding opportunities and priorities. Local governments, with public input, are in the best position to identify ideas that can facilitate forward thinking local action. Although local governments do not have a mandate under SB 375, they play a critical role in implementing the SCS and encourages incentives for their participation.

III. RECOMMENDED SEVEN STEP PROCESS FOR TARGET SETTING

This last section summarizes the “bottoms up” seven step process the Committee recommends as part of the target setting process.

At the core of the process is collaboration between the MPOs and ARB, with support from the other state and federal agencies involved in the RTP process. The recommended process is a way to set expectations about how that interaction could occur.

This process will require a significant effort from all those involved within a short time to meet the June 30, 2010 deadline for draft targets. It will require direct participation and buy-in from local jurisdictions, county transportation commissions, affected air districts, and other major stakeholders. The Committee strongly believes that transparency is critically important and recommends that all data, analyses, and documents be available for public review and that public participation be provided at every step in the process

Step 1: MPO Creates Baseline Estimates.

MPOs review the adopted fiscally constrained RTP and analyze the location and intensity of future land uses that are reasonably expected to occur to estimate GhG levels for the 2005 base year and the 2020 and 2035 target years. To the extent practicable, the MPO would use statewide assumptions for variables such as fuel price, fleet mix, and demographic forecasts. Each MPO’s analysis would be made available to the public.

Step 2: CARB Compiles Baseline Estimates

CARB uses the results from Step 1 to compile baseline business as usual estimates for each MPO in the 2005 base year and the 2020 and 2035 target years. These results will be compared with MPO fuel use data and unexpected differences would be explained. ARB will then meet with the MPOs to share the results and make them available to the public for review. The final result will be an emissions baseline against which further reductions from regional strategies development in steps 3 and 4 can be compared.

Step 3: Estimating the Ambitious Achievable

MPOs and CARB would develop and test the sensitivity of multiple scenarios that are likely to result in emission reductions, such as increased transportation funding, policies that promote infill or preserve open space, programs that increase density and transportation integration, policies that locate affordable housing near transit, and measures that reduce transportation demand. In identifying the measures, MPO staffs and ARB staff would use information from existing scenario assessments and cost-effectiveness studies wherever possible.

This testing would help identify performance indicators that could be measured over time. In addition to emission reductions, these indicators would measure performance related to the transportation system, economy, environment, social equity, and housing. To the extent feasible, performance indicators should be consistent from region to region.

Step 4: ARB Creates a Draft Statewide Target

MPOs analyze the alternative scenarios using their own measuring methodologies and forward the results to ARB, explaining the reasons for any difference in key outputs. At this time, an MPO may also submit a proposed regional target as provided by SB 375. ARB will compile the results, and, combined with its review of empirical studies and other relevant information that relates to passenger vehicle and light truck greenhouse gas emissions (including new auto fuel efficiency standards and clean fuels), prepare a preliminary draft uniform statewide target for public review and comment.

This process should be completed by March 1, 2009 in most parts of the state, and by April 30, 2010 for the Southern California Association of Governments (SCAG). Within this time frame, the Committee plans to hold a future public meeting to review MPO scenario data to provide an opportunity for the members to evaluate the results of the scenario analyses for the target setting process.

Step 5: Comments on Draft Target

MPOs and stakeholders provide feedback to ARB on the preliminary draft uniform statewide target as well as any formal regional target submittals received from an MPO in Step 4, to assess whether any region's target should be adjusted either above or below the preliminary draft target. Any revisions would be subject to a "reasonably tough test" to ensure that the target is the most ambitious achievable.

Step 6: Adoption of Draft Target

ARB Board must adopt draft targets by June 30, 2010.

Step 7: Adoption of Final Target.

Exchange of technical information continues until targets are finalized before September 30, 2010.

IV NEXT STEPS

The following bullets summarize the next steps in the process. This table was compiled by the author and was NOT included in the actual Committee Report.

DATE	ACTION
Nov. 19, 2009	ARB Board will consider the Committee report at its November meeting.
December, 2009 to January, 2010	ARB begins to engage public to develop a list of BMPs
Feb-March 2010	RTAC reconvenes to review MPO scenario planning efforts
March 1, 2010	Steps 1 through 4 of Seven Step Process completed for all but SCAG region
March, 2010	CARB publishes BMP list
April 30, 2010	Steps 1 through 4 of Seven Step Process completed for SCAG region
June 30, 2010	ARB staff submits draft target to Board
Sept 30, 2010	Final targets are submitted to ARB Board
Fall 2010	CARB develops BMP Spreadsheet Tools