B1 - DATA SOURCES

An Overview on Research Strategies

This Appendix is intended to help environmental planners and others concerned with community impact assessment issues collect the needed information. It concentrates on basic informational sources and publications covering a wide area, with a specific focus on the federal census and state agencies. It also provides several rules of thumb. For some experienced environmental planners, the discussion below will not contribute greatly to their knowledge on how to go about gathering and critically using information and data. On the other hand, some environmental planners have educational backgrounds in vastly different areas than those in which they work and may find this guidance to be useful. No attempt is made here to cover each potential issue area completely, but the Appendix introduces a number of the sources that we have found valuable to other planners working in the social and economic area.

The nature of research, data sources, and their strength and weaknesses are included in the discussion. As was pointed out in Chapter 1 of this volume, the federal and state environmental guidelines call for a level of detail of data collection and analysis consistent with the expected magnitudes of the impacts of the proposed project.

The first question everyone should ask when pursuing information is, "Who already knows what I need to know?" In many cases, in-house staff might have the expertise. Check the <u>local</u> <u>Caltrans district</u> in the county that is being assessed for additional information. For example, the Economic Analysis Unit in the Caltrans Headquarters Transportation Planning Program may be able to point the environmental planner in the direction of certain broad-coverage economic data and information, depending on the nature of the question. The Caltrans Headquarters Transportation System Information Program has expertise on use of the U.S. Census. Find a well-informed, helpful reference librarian (including the staff of the California State Library Government Section, or the Caltrans Headquarters Transportation Library (916/654-4601) who can assist you in tracking down documents, telephone numbers, and personal contacts. The community impact specialist within the Division of Environmental Analysis may also be of some assistance.

The official website or main library in the town in which the project is located should always be visited by the planner for any projects in which community and land use issues may be prominent. Not only will such sites usually provide important local planning documents, but they will often have links to various community resources and groups as well.

Local newspapers may also have online resources that have past articles indexed. Don't overlook other popular literature abstracts and bibliographies to provide contextual information. Among the most useful in the area of social and economic topics are the: <u>Wilson Web</u>, <u>Social Sciences</u> <u>Index</u>, and <u>Public Affairs Information Service</u>, to name a few.

Government agencies, both federal and state, have resident experts on just about every subject imaginable, so a related question to ask is, "To which agency might this information be important, and who might have collected such data?" In one instance, concerned local officials

questioned Caltrans environmental staff about the economic effects (job losses) of a major project with extensive farmland conversion (due to right-of-way acquisition) on local seasonal laborers. The question led to a call to the state's Employment Development Department which revealed that they had recently had produced a major economic study on essentially the topic of acreage and seasonal labor.

This notion of contacting potentially useful governmental agencies, of course, holds true for locally-generated information and data as well. When searching for information on mobile home parks in a community, for instance, one might find the needed information at the local health department, the planning department, or the tax assessor's office. Many of these local governmental agencies already may have gathered extensive community data, as Chapter 3 in this volume indicates. The most recent data should be used for all analyses. If the only available data is not current, it should be statistically updated using clearly stated assumptions and methodologies.

Read the technical documentation that accompanies each data source. This background material explains how the data was collected and provides definitions of terms used and often reprints the questionnaire used to collect the data. Sources often have biases that must be understood and evaluated when considering the data. Be sure to understand the reason data is collected, combined and/or compared. For instance, the planner should be aware that a city might project its growth differently than the regional councils of government; an apartment-owners association might tally up a different total of available apartment units than the county planners. Perhaps the least unbiased statistical data on social and economic topics are provided by the federal government (although this notion is challenged in Alonso and Starr's book, *The Politics of Numbers*. See Appendix A for full citation). Nevertheless, it is very likely that the planner will be required to link together data from different sources to obtain an integrated picture of the community.

Many social and economic impacts are difficult to quantify. In many cases, random sample surveys (interviews or questionnaires) are the most viable method available to gather these data, although they can become expensive tools. Because surveys can be unintentionally biased (e.g., based upon the wording of the questions, the available answers, when and where the responses are gathered, etc.), only professionals experienced in designing and implementing surveys should be used to assure statistical validity and reliability. There are several good secondary books on survey research methods.

Another option when quantifiable data is scarce is to use the Delphi Technique; that is, form a panel of experts with some knowledge on the subject and have the panel brainstorm the topic at length. Combine that with a judicious use of the secondary literature. It is important to stress that these techniques are called for only with complex projects. Publications from the <u>American</u> <u>Planning Association</u>, <u>Lincoln Institute of Land Policy</u>, <u>Urban Land Institute</u>, and <u>International</u> <u>City Managers Association</u> may be particularly useful in many of these areas.

By The Numbers

When quantification is possible, numbers may bestow credibility and authority on an issue by pinning down what otherwise might seem a vague generality or unsubstantiated personal

opinion. Putting numbers into studies is a two-part task. Obviously you must obtain the numbers, then you must present them in the clearest and simplest way possible.

Governments—local, state and federal—are are the largest collectors and disseminators of statistical data. Associations and institutions covering every imaginable type of activity also generate numbers. Much of this data is available online (see below), although sometimes it may take a few phone calls to obtain the appropriate document, especially if it consists of older information. However, these groups are usually more than happy to give the planner help. If that person or agency does not have the required information, they can often direct you to one that does.

After you gather the data, you must add value to them. This simply means that you interpret the numbers and reorganize them as necessary, making comparisons or doing additional calculations so that the material can be presented as clearly as possible to the readers. Comparing values at different points in time is one way to gain perspective. Another is to compare the local area to that of another nearby area, and usually to the state as a whole. As an example, between 1982 and 1988, statistics indicate that the city of Palo Alto's sales tax revenue climbed 29%. That sounds like a lot—until compared to the county average, which was 48% during the same time span, or neighboring Sunnyvale, which saw a 66% sales tax revenue jump.

When gathering, analyzing, and presenting numerical data, remember that there are significant differences between a median number and an average number. The median is the number at the midpoint in a list of ranked numbers. For example, in comparing 11 items ranked smallest to largest, the sixth item is the median, even if the actual value of that number is not halfway between the highest and the lowest. The average or mean on the other hand is the sum of all divided by the number of observations. In measurement statistics, when data are highly skewed, median is a better statistic to use. Percent-change expresses a ratio between two numbers and gives readers a way to make comparisons. Percentages, however, can be deceiving. If you start with a small base number, small actual gains can produce deceptively large percentage gains. In such cases, the actual numbers should also be given so readers can judge for themselves, or the readers should be told that a particularly large percent increase resulted from a very small base. The following list of sources of information can be used in either the primary or secondary information gathering process as appropriate to the subject:

U. S. Government

<u>U.S. Census Bureau</u>

As discussed in Chapter 3, social and demographic information is gathered and presented online by the U.S. Census Bureau. The most convenient way to find information is from the <u>American</u> <u>Factfinder</u> portion of the site. Here you can find the data sets for the <u>Decennial Census</u> dating from 1990. Keep in mind two facts when choosing among files and data. First, data in 100% reports (Short form or Summary File 1) are more accurate than data in sample reports (Long form or SF3). Second, remember the hierarchy principle. More detailed data are reported for areas higher in the geographic hierarchy, such as counties and large cities, rather than small cities, census tracts, and blocks.

Comparing raw data between censuses allows you to measure trends. However, make sure that the boundaries and definitions are consistent. For example, Census 2000 race data are not

directly comparable with data from 1990 and previous censuses, because prior to 2000 respondents could not select more than one race and revisions to race categories were made.

State of California

The <u>State of California</u> has its own website can provide a wealth of information for the environmental analyst. The following are examples of departments and links that may be useful.

<u>California Resources Agency</u>

The Land Use Planning Information Network (LUPIN) was developed by the State of California Resources Agency to address and support California's land use planning information needs. A project of <u>CERES</u> (California Environmental Resources Evaluation <u>System</u>), <u>LUPIN</u> utilizes the World Wide Web to disseminate information relevant to land use and environmental planning. Both <u>CERES</u> and <u>LUPIN</u> are programs created in cooperation with local, state, and federal government agencies, academic institutions, and community groups. <u>LUPIN</u> includes: planning-related reports from federal and state agencies, county and city General Plans, environmental documents, legal references, and maps, and other online materials

State Controller

Provides an "Annual Report of Financial Transactions Concerning Cities and Counties of California."

State Board of Equalization (SBE)

Provides information on taxable sales. The SBE will provide you with the name of the owner of a business, its location, the type of business, and starting date (and closing date if it is no longer in business). Another SBE publication, "Taxable Sales in California," reports sales per capita, and by type of store.

Employment Development Department (EDD)

The EDD's <u>Labor Market Info</u> site provides information on employment, unemployment, hours and earnings, and various special studies. The California EDD makes county- and regional-level estimates and projections of employment by industry and occupation for all of California.

Department of Finance (DOF)

The DOF has many useful publications for demographic and economic research.

Department of Housing & Community Development (HCD)

Provides information on housing elements and other issues, such as affordable housing, mobile homes, etc.

Department of Industrial Relations (DIR)

Information on the California consumer price index can be found here.

Department of Rehabilitation (DOR)

Provides statistical information on disabled Californians.

Other California agencies and departments can be a helpful source, depending on the type of impacts to be studied. Be sure to browse through the State of California Website's <u>State Agency</u> <u>Directory</u> for other links.

Regional and Local

Cities, counties, and many of their affiliates have their own websites that provide a wide range of useful information, including planning policies, forecasts, population counts, and economic data.

The <u>California Association of Councils and Governments</u> provides information on California's regional councils of government. As of spring 2011 CALCOG members included the following:

- Association of Bay Area Governments
- Association of Monterey Bay Area Governments
- Butte County Association of Governments
- <u>Calaveras Council of Governments</u>
- <u>Coachella Valley Association of Governments</u>
- <u>Contra Costa Transportation Authority</u>
- Council of Fresno County Governments
- <u>Council of San Benito County Governments</u>
- <u>El Dorado County Transportation Commission</u>
- <u>Humboldt County Association of Governments</u>
- Kern Council of Governments
- Kings County Association of Governments
- Lake County/City Area Planning Council
- Los Angeles County Metropolitan Transportation Authority
- Madera County Transportation Commission
- Mendocino Council of Governments
- Merced County Association of Governments
- <u>Metropolitan Transportation Commission</u>
- Orange County Council of Governments
- Orange County Transportation Authority
- Placer County Transportation Planning Agency
- <u>Sacramento Area Council of Governments</u>
- San Bernardino Associated Governments
- San Diego Association of Governments
- <u>San Joaquin Council of Governments</u>
- San Luis Obispo Council of Governments
- Santa Barbara County Association of Governments
- Santa Cruz County Regional Transportation Commission
- Shasta County RTPA
- Southern California Association of Governments
- <u>Stanislaus Council of Governments</u>
- <u>Transportation Agency for Monterey County</u>
- <u>Tulare County Association of Governments</u>
- <u>Tuolumne County Transportation Council</u>
- Ventura County Transportation Commission/Ventura Council of Governments
- Western Riverside Council of Governments

Additional regional councils of government not belonging to CALCOG include:

- <u>Amador County Transportation Commission</u>
- <u>Riverside County Transportation Commission</u>

Other helpful local sources of information include:

- Association of Realtors (local)
- Churches and synagogues
- City and county Tax Assessors office
- Chambers of commerce
- Police and fire departments
- Public utility companies
- School district business office

B2 - SAMPLE INTERVIEW QUESTIONS

The following is a list of questions that may be useful to ask in an interview with selected community members:

- 1. Are you aware of any prior government agency projects for which a study was prepared and data was collected in your neighborhood? If so, what was the project and what agency was involved?
- 2. Are there predominant employers that serve the neighborhood?
- 3. Who would you say are the neighborhood leaders? How long have they been in leadership positions?
- 4. Would you characterize your neighborhood as close-knit? Do individuals seem to know each other and interact with each other?
- 5. Do you have a feel for the level of trust that groups or individuals in your neighborhood may have in Caltrans?
- 6. Is your neighborhood changing? How?
- 7. What are people's attitudes towards the project?

Remember that this is not a comprehensive list of questions, and it can be modified to better suit the needs of the specific project.

B3 - SAMPLE SURVEY QUESTIONS

The following is a sample of questions that may be useful when soliciting information in a questionnaire format:

First, we want to know how you feel about your neighborhood. (Please mark 'x' in the box beside the best answer, or answer the question to the best of your ability.)

1. Would you say the quality of life in your neighborhood is:

Improving

Getting worse

- Staying the same Don't know/No opinion
- 2. How is your neighborhood changing? (If you don't think your neighborhood is changing, or if you don't know/have no opinion, then skip to the next question).
- 3. How do you feel about living in your neighborhood?
- 4. Do you interact with your neighbors? In what way? How often?
- 5. What neighborhood businesses, public facilities (parks, senior center, library, etc.), and private facilities (religious institutions, clubs, etc.) do you frequent? Please list them.
- 6. For those places listed in Question 5, how do you typically get there (car, bike, walk, etc.), and what route do you usually take?
- 7. How long have you lived in the neighborhood? Years
- 8. Do you plan to remain in the neighborhood? Yes 🗌 No 🗌
- Do other members of your family live in your neighborhood, but not in your house? Yes □ No□
- 10. Do you feel safe in your neighborhood? If not, please explain. Yes 🗌 No 🗌
- 11. Did you know about the project before you read this survey? Yes No If you answered "Yes," how did you hear about it?

Friends/Neighbors Local Newspaper Project Newsletter

Other (Please indicate)

- 12. How do you feel the project would affect your neighborhood?
- 13. Studies of similar projects have shown that they created some benefits. Below are some possible benefits of the project. How important is each of these to you?

	Very Low	Low	Medium	High	Very High
A. Faster route in and out of your neighborhood?					
B. Temporary economic boost from work force and related jobs.					
C. Increased commercial services.					
D. Other benefits (Please list and rate)					

14. Studies of similar projects have also shown that they created negative effects. Below are some possible negative effects of the project. How important is each of these to you?

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	Very Low	Low	Medium	High	Very High
A. Relocation of you, your friends, neighborhood businesses.					
B. Loss of your sense of living in a neighborhood.					
C. Dangerous for children getting to and from school					
D. Some neighborhood residents will move away					
E. Harder to walk through neighborhood					
F. Increased air and noise pollution					
G. More traffic in your neighborhood, harder to get to local streets					
D. Other issues (Please list and rate)					

15. How do you believe the project will affect your neighborhood? (Check as many as apply)

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- I will have to move
- My friends will have to move
- My business will have to move
- The project will take a part of my land
- I will end up living too close to the project

The project will not affect me or my family directly



There are other ways the project will affect me

16. Do you favor the proposed project?

	Yes		No [Don't know/No	Opinion
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Now we would like to know about you. This information would help us to understand what you have told us and what it means to you.

17. What is your gender?
Male Female
18. How old are you?
16-30 years old 41-50 years old 61-70 years old
□ 31-40 years old □ 51-60 years old □ 71 years and older
19. Please indicate your level of education
Did not complete high school 4-year college degree
High school graduate More than 4 years of college
Some college Other
2-year college degree
20. How many people live in your house, including you?
1 person 4 people
2 persons 5 people
3 people More than 5 people
21. Do you have any children that are of school age?
Yes No
22. What is your race or ethnic background?
White, except Hispanic American Indian or Alaskan Native
Hispanic Asian or Pacific Islander

Black

Other (specify)

Thank you very much for your time and help. You can contact our office if you have any questions about the study by writing or calling the contact person below:

Now that you have finished the survey, please put it in the enclosed, postage-paid envelope and place it in the mail by the following date:

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B4 - GENERAL COMMUNITY IMPACT ASSESSMENT TECHNIQUES

Technique	Description
Trend Projection and Correlation	These are statistical analysis techniques that make use of historical data to forecast potential future impacts of project alternatives. Trend projection analysis estimates a future condition by extrapolating historical time series data into the future and assuming that the underlying factors that created the observed historical trend will remain substantially the same. Trend correlation analysis determines the most likely future state by examining the observed relationship between one or more factors (independent variables) that create the historical trend (dependant variable) and developing a mathematical model (regression equation) to explain that relationship.
Case Study Comparison	Case study comparison uses the experience of similar transportation actions in other locations to determine potential project impacts. Projects and areas should be as similar as possible in size, project type, location, design, geography, available data sources, and any other relevant characteristic. The technique begins with identifying existing case studies that describe before and after conditions or creating new case studies by collecting the required information through survey, interview, and other secondary data source collection techniques. Next, likely impacts are determined based on the experience of all available case studies and by estimating likely impacts of the proposed project alternatives. Analogies are made and similarities and differences are examined over time or across areas.
Visual Imaging and Computer Simulation	This technique involves the use of computer software to generate a visual simulation of the project corridor with and without proposed project alternatives. It can be used to compare and contrast the potential impacts of various project alignments and design concepts in a manner that is simple to comprehend. It gives the user the capacity to ask "what if" questions that can be answered visually using the simulation procedure.
Geographic Information Systems/Mapping Overlays	This technique involves superimposing various corridor features (physical characteristics, demographics, and project alternatives) to analyze and understand spatial relationships. GIS has the capacity to store and process enormous amounts of data and can perform numerous analytical tasks including determining physical proximity. For example, noise contour data can be compared to minority population data to determine potential environmental justice issues. A wide variety of information is available from many public and private sources, dramatically reducing data collection time.
Panel or Peer Review	This technique solicits the expert opinion of knowledgeable professionals in a face-to-face environment to estimate likely project alternative impacts. The analyst provides the expert panelists with background information and facilitates a discussion on likely outcomes. Because the experts are gathered together in a meeting, each has an opportunity to argue his or her point of view and be persuaded by other points of view. This can lead to a deeper understanding of each expert's opinion, but can also allow dominant personalities to overwhelm equally valid positions. The desired outcome is consensus on potential project impacts.
Charrette	A charrette is a meeting of stakeholders and interested parties to resolve a problem or focus on a single issue with a range of potential solutions. Within a specific length of time, participants work together intensively to reach a resolution and consensus. In a charrette, issues requiring resolution are defined. Then participants are broken into small groups, each assigned a specific issue or part of an issue to resolve. Staff members facilitate the process and provide technical support. Each group develops solutions to an issue and shares their ideas with the broader group. The whole group then discusses the solutions and consensus is reached.
Brainstorming	Brainstorming is the generation of ideas through quick response reactions in a freethinking forum. In a brainstorming session, a group of stakeholders are asked to respond to a series of questions and situations. All ideas are listed without comment or evaluation. Each idea is then evaluated with participants having the opportunity to ask questions and hear responses from the person who generated the idea. Ideas are then grouped and consensus is reached.
Delphi Technique	The Delphi technique is a systematic, structured way to use expert opinion to determine likely project impacts. Experts provide their judgments about the potential impacts of project alternatives anonymously by responding to several rounds of questionnaires. Each expert is originally provided with the same background material from which to develop their opinions and a questionnaire to complete. The first questionnaire, in most cases, consists of open-ended questions. The analyst summarizes and statistically analyzes the

	results of the first round and submits the results to the experts for their reconsideration and response along with a new, often more structured, questionnaire. This continues for several rounds until consensus or a clearly defined difference of opinion is reached. The process differs from other expert opinion techniques in that it allows experts to reconsider their opinion in light of other reasoned opinions without allowing lobbying or other personal interaction.
Scenario Writing	Scenario writing attempts to anticipate a possible future condition based on a series of probable events given a set of assumptions. Scenarios are written out in narrative form starting with the present condition and moving logically through time to a predetermined horizon year. Between those two fixed points in time, the narrative assumes a logical progression of as many hypothetical developments and changing conditions as is possible. In that manner, all possible conditions can be accounted for and logically incorporated into the progression of the scenario until the horizon year is reached. The basic steps include developing a vision of the future, developing a problem statement and a list of critical issues, selecting a horizon year for the potential future scenario, collecting relevant data and information, and writing out the possible scenarios including any and all logical and potential information.
Alternative Futures	The alternative futures technique focuses on specific problems or issues through the development of multiple broad visions of future conditions. Comparing several possible future visions based around the same issue provides a better sense of possible causes and effects related to project design and potential project alternative impacts. The technique focuses on what conditions can coexist together, not on how they developed. This technique allows the visions of more than one stakeholder group to be considered simultaneously and focuses on specific endpoints such as community aesthetics or cohesion.
Indicators Analysis	Indicators use relatively small, measurable pieces of information to represent broader community issues and conditions. For example, neighbor-to-neighbor interaction can be used as an indicator of community cohesion. Indicators analysis involves the collection of specific, measurable pieces of data and the comparison of that data against a pre-established standard or goal. Assessing a number of indicators as a whole provides insight into the general socioeconomic condition of a neighborhood or community. Tracking a set of indicators over time provides a means for assessing relative changes in that socio-economic condition. Indicator analysis can be used to 1) assess socio-economic conditions within a community or neighborhood, 2) develop policy and evaluate the efficacy of existing government activities and programs, and 3) compare conditions between two or more neighborhoods or communities.
Matrices	A project evaluation matrix is a grid on which two distinct lists are arranged (e.g., project alternatives along the side and potential social impacts across the top) for the purpose of comparison. The relative effects of various actions can be determined by comparing the values, descriptive or numerical, in a given cell of the grid. A scoring or ranking system and a weighting system can be applied to the various interactions to assist the decision-making process.
Focus Groups	A focus group is a carefully planned discussion that is designed to obtain perceptions on a defined area of interest. It is facilitated by a person knowledgeable of group dynamics and the topic of discussion. The emphasis is on revealing perspectives, insights, and opinions of participants through conversation and interaction. Successful focus groups require a well-defined purpose. Once the purpose has been defined, the analyst must determine who can provide the needed information. Focus group participants are typically from homogeneous target populations to ensure that they feel comfortable speaking in the group atmosphere. All participants should share some important characteristics that have been determined based on the purpose of the focus group research. Typically, at least two focus groups are held with each targeted population group so that data can be compared and contrasted. The result is information related to the opinions of local people that can provide insight into public reactions to specific issues at one point in time.
Checklists	Checklists provide a list of common or likely impacts along with questions related to the factors that contribute to those impacts. Checklists structure the analysis process and reduce the likelihood that effects will be overlooked. They also provide a means of concisely presenting potential impacts.
Visual Preference Surveys	Visual preference surveys are used to identify community and design characteristics that stakeholders prefer. In this technique, images are displayed for about 5 seconds and

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	stakeholders are asked to rank their initial reaction to the image on a scale from -10 to +10. The results are then tallied by adding the total points and dividing by the number of participants. The results can be sorted in a variety of ways to gain insight into stakeholder preferences.
Nominal Group Method	In the nominal group process, participants come together in a nonthreatening group situation where balanced input from all parties is ensured and each participant's unique knowledge and experience is utilized. The meeting facilitator presents the topic or issue that is the focus of the meeting, often in a question format. Participants are asked to write as many responses or ideas as possible. A round robin discussion of all the ideas and responses follows and all are listed, clarified, and discussed. Participants are then asked to rank or prioritize the list of ideas or responses in order of importance. This approach is very useful in a group setting as it allows for and encourages the individual generation of ideas without the possibility of dominance by an individual group member.

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