NOAA FISHERIES SECTION 515
PRE-DISSEMINATION REVIEW & DOCUMENTATION GUIDELINES

Background

Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-554, aka the Data Quality Act or Information Quality Act) directed the Office of Management and Budget (OMB) to issue government-wide guidelines that "provide policy and procedural guidance to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by federal agencies." OMB complied by issuing guidelines which direct each federal agency to 1) issue its own guidelines; 2) establish administrative mechanisms allowing affected persons to seek and obtain correction of information that does not comply with the OMB 515 Guidelines or the agency guidelines; and 3) report periodically to OMB on the number and nature of complaints received by the agency and how the complaints were handled. The OMB Guidelines can be found at:
http://www.whitehouse.gov/omb/fedreg/reproducible2.pdf

The Department of Commerce Guidelines can be found at:
http://www.osec.doc.gov/cio/oipr/iqg.htm

The NOAA Section 515 Information Quality Guidelines, created with input and reviews from each of the components of NOAA Fisheries, went into effect on October 1, 2002. **The NOAA Information Quality Guidelines are posted on the NOAA home page under "Information Quality." http://www.noaanews.noaa.gov/stories/iq.htm**

The guidelines apply to a wide variety of government information products and all types of media, including printed, electronic, broadcast or other. The guidelines define "Information" as, "any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms." For example, this definition includes information that an agency disseminates from a web page. The guidelines define "Dissemination" as, "agency initiated or sponsored distribution of information to the public." Explicitly **not** included within this term is distribution limited to "government employees or agency contractors or grantees; intra- or inter-agency use or sharing of government information; and responses to requests for agency records under the Freedom of Information Act, the Privacy Act, the Federal Advisory Committee Act or other similar law." It also does not include distribution limited to correspondence with individuals or persons, press releases, archival records, public filings, subpoenas or adjudicative processes. (See the NOAA IQ Guidelines, pgs 5-6).

To assist in Data Quality Act compliance, NOAA Fisheries has established a series of actions that should be completed for each new information product subject to the Data Quality Act. (See "Information Generation and Compliance Documentation" and "Pre-Dissemination Review" below.) **In addition to the information contained in this document, familiarity with the NOAA Section 515 Information Quality Guidelines**

(http://www.noaanews.noaa.gov/stories/iq.htm) is crucial for NOAA Fisheries employees who engage in the generation and dissemination of information.

Information Generation and Compliance Documentation

• The fundamental step in the process is to create a Sec. 515 Information Quality file for each new information product. To aid in this process, a Section 515 Pre-Dissemination Review and Documentation form has been created. These guidelines are intended to serve as a supplement to the Pre-Dissemination Review and Documentation Form. The basic steps to the documentation process are outlined below.

• Complete general information (e.g., author/responsible office, title/description) section of the form.

• Determine the information category (i.e., original data; synthesized products; interpreted products; hydrometeorological, hazardous chemical spill, and space weather warnings, forecasts, and advisories; experimental products; natural resource plans; corporate and general information). **For most information products, you will only need to check one box.** More complex documents may be an "aggregate" of different categories of information products.

• Generate the information in a way that meets each of the applicable standards for the appropriate information category. See the NOAA Information Quality Guidelines.

• Document how the standards for **utility, integrity** and **objectivity** are met for each information product, describing what measures were taken to meet each of the applicable standards. Use the 2 page Pre-Dissemination Review & Documentation Form to document compliance with the Utility and Integrity standards contained in NOAA's Information Quality Guidelines. The Utility and Integrity standards pertain to all categories of information disseminated by NOAA. Use these guidelines (pgs 4-11) to document compliance with the applicable objectivity standards for your information product and attach that documentation to the Pre-Dissemination Review & Documentation Form.

• Maintain the Sec. 515 Information Quality file in a readily accessible place.

Pre-Dissemination Review

• Before information is disseminated, it must be reviewed for compliance with the NOAA Sec. 515 Information Quality Guidelines. This is accomplished by reviewing the information and the Sec. 515 Information Quality file.

• The Pre-Dissemination Review should be conducted during the normal course of clearing the information product for release. The person conducting the Pre-Dissemination Review will sign and date the Pre-Dissemination Review &

Documentation Form. The reviewing official must be at least one level above the pereson generating the information product.

• The Pre-Dissemination Review form and the supporting information quality documentation must accompany the information product through the clearance process and be maintained on file.

Completing the Section 515 Pre-Dissemination Review & Documentation Form

Using the Section 515 Pre-Dissemination Review & Documentation Form and these guidelines, document how the information product meets the following standards for **Utility, Integrity** and **Objectivity. Please note:** Use the Pre-Dissemination Review & Documentation Form to document how the information product complies with the Utility and Integrity standards that pertain to all categories of information products. The Utility and Integrity standards are presented here for your convenience. Use these guidelines to explain how the information product meets the applicable Objectivity standards for the information product and attach that documentation to the Pre-Dissemination Review & Documentation Form.

I. Utility of Information Product

Utility means that disseminated information is useful to its intended users. "Useful" means that the content of the information is helpful, beneficial, or serviceable to its intended users, or that the information supports the usefulness of other disseminated information by making it more accessible or easier to read, see, understand, obtain or use.

A. Is the information helpful, beneficial or serviceable to the intended user? Explain.

B. Who are the intended users of the data or information product? (e.g., the American public; other federal agencies; state and local governments; recreational concerns; national and international organizations). Is this data or information product an improvement over previously available information? Is it more detailed or current? Is it more useful or accessible to the public? Has it been improved based on comments or interactions with users?

C. What media are used in the dissemination of the information? Printed publications? CD-ROM? Internet?
Is the product made available in a standard data format?
Does it use consistent attribute naming and unit conventions to ensure that the information is accessible to a broad range of users with a variety of operating systems and data needs?

II. Integrity of Information Product

Integrity refers to security - the protection of information from unauthorized access or revision, to ensure that the information is not compromised through corruption or falsification. Prior to dissemination, NOAA information, independent of the specific intended distribution mechanism, is safeguarded from improper access, modification, or destruction, to a degree commensurate with the risk and magnitude of harm that could result from the loss, misuse, or unauthorized

access to or modification of such information. **Please note: all electronic information disseminated by NOAA adheres to the standards set forth in paragraph A below. If the information product is disseminated electronically, simply circle paragraph II(A) on the form.** You may also contact your IT Manager for further information.

Explain (circle) how the information product meets the following standards for integrity:

A. All electronic information disseminated by NOAA adheres to the standards set out in Appendix III, "Security of Automated Information Resources," OMB Circular A-130; the Computer Security Act; and the Government Information Security Reform Act.

B. If information is confidential, it is safeguarded pursuant to the Privacy Act and Titles 13, 15, and 22 of the U.S. Code (confidentiality of census, business and financial information).

C. Other/Discussion
(e.g., 50 CFR 600, Subpart E, Confidentiality of Statistics of the Magnuson-Stevens Fishery Conservation and Management Act; NOAA Administrative Order 216-100, Protection of Confidential Fisheries Statistics; 50 CFR 229.11, Confidentiality of information collected under the Marine Mammal Protection Act.)

III. Objectivity of Information Product

(1) Indicate which one of the following categories of information products apply for this product (check one):

- ☐ Original Data - go to Section A
- ☐ Synthesized Products - go to Section B
- ☐ Interpreted Products - go to Section C
- ☐ Hydrometeorological, Hazardous Chemical Spill, and Space Weather Warnings, Forecasts, and Advisories - go to Section D
- ☐ Experimental Products - go to Section E
- ☐ Natural Resource Plans - go to Section F
- ☐ Corporate and General Information - go to Section G

(2) Describe how this information product meets the applicable objectivity standards.

General Standard: Information is presented in an accurate, clear, complete, and unbiased manner, and in proper context. The substance of the information is accurate, reliable, and unbiased; in the scientific, financial or statistical context, original and supporting data are generated and the analytical results are developed using sound, commonly accepted scientific and research methods. "Accurate" means that information is within an acceptable degree of imprecision or error appropriate to the particular kind of information at issue and otherwise meets commonly accepted scientific, financial and statistical standards.

If the information is "influential," that is, it is expected to have a genuinely clear and substantial impact on major public policy and private sector decisions, it is noted as such and it is presented with the highest degree of transparency. If influential information constitutes an assessment of

risks to human health, safety or the environment, indicate whether the risk assessment was qualitative or quantitative, and describe which SDWA-adapted quality standards at page 9 of NOAA's Section 515 Information Quality Guidelines were applied to the information product.

Use of third party information in the product (information not collected or generated by NOAA) is only done when the information is of known quality and consistent with NOAA's Section 515 Guidelines; any limitations, assumptions, collection methods, or uncertainties concerning the information are taken into account and disclosed.

Specific Standards: Specific objectivity standards for categories of information products disseminated by NOAA are listed below. Document how the general and specific objectivity standards for the particular information product were met.

A. Original Data

Original Data are data in their most basic useful form. These are data from individual times and locations that have not been summarized or processed to higher levels of analysis. While these data are often derived from other direct measurements (e.g., spectral signatures from a chemical analyzer, electronic signals from current meters), they represent properties of the environment. These data can be disseminated in both real time and retrospectively. Examples of original data include buoy data, survey data (e.g., living marine resource and hydrographic surveys), biological and chemical properties, weather observations, and satellite data.

Objectivity of original data is achieved using sound quality control techniques.

Detail how the data collection methods, systems, instruments, training, and/or tools are appropriate to meet the requirements of the intended users.
Were the methods, systems, instruments, etc., validated before use?
Were standard operating procedures (SOPs) followed for time series data collections? If not, document the valid scientific reasons for the deviation.

Document the quality control techniques used, for example:

- Gross error checks for data that fall outside of physically realistic ranges (e.g., a minimum, maximum or maximum change)
- Comparisons made with other independent sources of the same measurement
- Examination of individual time series and statistical summaries
- Application of sensor drift coefficients determined by a comparison of pre- and post-deployment calibrations
- Visual inspection of data

Describe any evolution and/or improvements in survey techniques, instrument performance and/or data processing.

Have metadata record descriptions and explanations of the methods and quality controls to which original data are subjected been included in the disseminated product? If not, they must be made available upon request.

B. Synthesized Products

Synthesized Products are those that have been developed through analysis of original data. This includes analysis through statistical methods; model interpolations, extrapolations, and simulations; and combinations of multiple sets of original data. While some scientific evaluation and judgment is needed, the methods of analysis are well documented and relatively routine. Examples of synthesized products include summaries of fisheries landings statistics, weather statistics, model outputs, data display through Geographical Information System techniques, and satellite-derived maps.

The objectivity of synthesized products is achieved by using data of known quality, applying sound analytical techniques, and reviewing the products or processes used to create them before dissemination. For synthesized products, please document the following:

Identify data sources (preferred option) or be prepared to make them available upon request.

Are the data used of known quality or from sources acceptable to the relevant scientific and technical communities?

Are the methods used to create the synthesized product published in standard methods manuals or generally accepted by the relevant scientific and technical communities? Are the methods documented in readily accessible formats by the disseminating office?

Describe the review process used to ensure the validity of the synthesized product or the procedures used to create them, e.g., statistical procedures, models, or other analysis tools.

> If the synthesized product is unique or not regularly produced, was this product reviewed by internal and/or external experts?

> If this is a routinely produced synthesized product, was the process for developing the product reviewed by internal and/or external experts?

Does the synthesized product include information about the methods used to create the product? If not, the methods must be made available upon request.

C. Interpreted Products

Interpreted Products are those that have been developed through interpretation of original data and synthesized products. In many cases, this information incorporates additional contextual and/or normative data, standards, or information that puts original data and synthesized products into larger spatial, temporal, or issue contexts. This information is subject to scientific interpretation, evaluation, and judgment. Examples of interpreted products include journal articles, scientific papers, technical reports, and production of and contributions to integrated assessments.

Objectivity of interpreted products is achieved by using data of known quality or from sources acceptable to the relevant scientific and technical communities and reliable supporting products, applying sound analytical techniques, presenting the information in the proper context, and reviewing the products before dissemination.

Are all data and information sources identified or properly referenced?

Are the methods used to create the interpreted product generally accepted by the relevant scientific and technical communities?

Is information concerning the quality and limitations of the interpreted product provided to help the user assess the suitability of the product for the user's application?

Describe the review process used to ensure that the product is valid, complete, unbiased, objective and relevant. For example, peer reviews, ranging from internal peer review by staff who were not involved in the development of the product to formal, independent, external peer review. The review should be conducted at a level commensurate with the importance of the interpreted product.

Does the interpreted product include a description of the methods used to create the product? If not, they must be made available upon request.

D. Hydrometeorological, Hazardous Chemical Spill, and Space Weather Warnings, Forecasts, and Advisories

Hydrometeorological, Hazardous Chemical Spill, and Space Weather Warnings, Forecasts, and Advisories are time-critical interpretations of original data and synthesized products, prepared under tight time constraints and covering relatively short, discrete time periods. As such, these warnings, forecasts, and advisories represent the best possible information in given circumstances. They are subject to scientific interpretation, evaluation, and judgment. Some products in this category, such as weather forecasts, are routinely prepared. Other products, such as tornado warnings, hazardous chemical spill trajectories, and solar flare alerts, are of an urgent nature and are prepared for unique circumstances.

Objectivity of information in this category is achieved by using reliable data collection methods and sound analytical techniques and systems to ensure the highest possible level of accuracy given the time critical nature of the products.

What is the source of the data or information used in the product? Are the data used of known quality or from sources acceptable to the relevant scientific and technical communities? Are the sources included in the information product? If not, they must be made available upon request.

Are the methods used to create the product generally accepted by the relevant scientific and technical communities?
Please note if individual best judgment was used due to the time-critical nature of the product.

What mechanisms were used to evaluate the accuracy of the information product? Statistical analysis may be carried out for a subset of products for verification purposes.

E. Experimental Products

Experimental products are products that are experimental (in the sense that their quality has not yet been fully determined) in nature, or are products that are based in part on experimental capabilities or algorithms. Experimental products fall into two classes. They are either (1) disseminated for experimental use, evaluation or feedback, or (2) used in cases where, in the view of qualified scientists who are operating in an urgent situation in which the timely flow of vital information is crucial to human health, safety, or the environment, the danger to human health, safety, or the environment will be lessened if every tool available is used. Examples of experimental products include imagery or data from non-NOAA sources, algorithms currently being tested and evaluated, experimental climate forecasts, and satellite imagery processed with developmental algorithms for urgent needs (e.g., wildfire detection).

Objectivity of experimental products is achieved by using the best science and supporting studies available, in accordance with sound and objective scientific practices, evaluated in the relevant scientific and technical communities, and peer-reviewed where feasible.

Describe the science and/or supporting studies used, the evaluation techniques used, and note any peer-review of the experimental product.

Were the results of initial tests or evaluations made available where possible?
Describe the review, by the appropriate NOAA unit, of the experimental products and capabilities documentation, along with any tests or evaluations.

Are explicit limitations provided concerning the quality of the experimental product?
Is the degree of uncertainty indicated?

Describe the testing process used, e.g., the experimental product or capabilities are used only after careful testing, evaluation, and review by NOAA experts, and then are approved for provisional use only by selected field offices or other NOAA components. This process is repeated as needed to ensure an acceptable and reliable level of quality.

F. Natural Resource Plans

Natural Resource Plans are information products that are prescribed by law and have content, structure, and public review processes (where applicable) that will be based upon published standards, e.g., statutory or regulatory guidelines. Examples of such published standards include the National Standard Guidelines (50 CFR Part 600, Subpart D), Essential Fish Habitat Guidelines, and Operational Guidelines - Fishery Management Plan Process, all under the Magnuson-Stevens Fishery Conservation and Management Act; and the National Marine Sanctuary Management Plan Handbook (16 U.S.C. section 1434) under the National Marine Sanctuary Act. These Natural Resource Plans are a composite of several types of information (e.g., scientific, management, stakeholder input, and agency policy) from a variety of internal and external sources. Examples of Natural Resources Plans include fishery, protected resource, and sanctuary management plans and regulations, and natural resource restoration plans.

Objectivity of Natural Resource Plans will be achieved by adhering to published standards, using information of known quality or from sources acceptable to the relevant scientific and technical communities, presenting the information in the proper context, and reviewing the products before dissemination.

What published standard(s) governs the creation of the Natural Resource Plan?
Does the Plan adhere to the published standards?
(See the NOAA Sec. 515 Information Quality Guidelines, Section II(F) for links to the published standards for the Plans disseminated by NOAA.)

Was the Plan developed using the best information available?
Please explain.

Have clear distinctions been drawn between policy choices and the supporting science upon which they are based? Have all supporting materials, information, data and analyses used within the Plan been properly referenced to ensure transparency?

Describe the review process of the Plan by technically qualified individuals to ensure that the Plan is valid, complete, unbiased, objective and relevant. For example, internal review by staff who were not involved in the development of the Plan to formal, independent, external peer review. The level of review should be commensurate with the importance of the Plan and the constraints imposed by legally enforceable deadlines.

G. Corporate and General Information

Corporate or general information includes all non-scientific, non-financial, non-statistical information. Examples include program and organizational descriptions, brochures, pamphlets, education and outreach materials, newsletters, and other general descriptions of NOAA operations and capabilities.

Corporate and general information disseminated by NOAA must be presented in a clear, complete, and unbiased manner, and in a context that enhances usability to the intended audience. To the extent possible, identify the sources of the disseminated information, consistent with confidentiality, privacy and security considerations and protections, and taking into account timely presentation, the medium of dissemination, and the importance of the information, balanced against the resources required and the time available.

Information disseminated by NOAA is reliable and accurate to an acceptable degree of error as determined by factors such as the importance of the information, the intended use, time sensitivity, expected degree of permanence, relation to the primary mission(s) of the disseminating office, and the context of the dissemination, balanced against the resources required and the time available.

For non-scientific, non-statistical information, has the information product been reasonably determined to be factually correct in the view of the disseminating office as of the time of dissemination?

Describe the review process for the information product. Review can be accomplished in a number of ways, including but not limited to combinations of the following:

- Active personal review of information by supervisory and management layers, either by reviewing each individual dissemination, or selected samples, or by any other reasonable method.
- Use of quality check lists, charts, statistics, or other means of tracking quality, completeness, and usefulness.
- Process design and monitoring to ensure that the process itself imposes checks on information quality .
- Review during information preparation.
- Use of management controls.
- Any other method, which serves to enhance the accuracy, reliability and objectivity of the information.