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Forest Service Manual 5409.12 – Appraisal Handbook

Chapter 20 – Appraisals Applications

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Responsible Staff:

Explanation of changes: Following is an explanation of the changes throughout the directive by section.

Posting Instructions: Amendments are numbered consecutively by Handbook number and calendar year. Post by document; remove the entire document and replace it with this amendment. Retain this transmittal as the first page(s) of this document. The last amendment to this Handbook was 5409.12-2005-3 and 5409.12-2005-4.

20: Changes chapter title from “Whole Property Appraisals” to “Appraisal Applications.” Revises chapter in its entirety. Makes minor technical, formatting, and editorial changes throughout the chapter.

21: Changes section title from “Timberland and Forested Property” to “Applications by Program Areas” and sets forth direction, recodes and renames section throughout.

21.1: Expands definition on purchase to include all purchases including assembled purchases. Market value, highest and best use, and larger parcel expounded upon with additional direction regarding larger parcel and Highest and Best Use and Uniform Appraisal Standards for Federal Land Acquisition requirements

21.31: Establishes code, caption, and sets forth direction on “Small Tracts Act Conveyances,” and adds references to FSH 5509.11, 36 CFR 254.42, and FSM 5410.42c.8.

21.32: Establishes code, caption, and sets forth direction on “Special Act Sales,” and provides guidance under Conveyances with cross reference to FSH 5509.11.26 and FSH 5509.11.21.81

22: Changes section title from “Grazing Land and Ranches” to “Application by Property Type: Timber” and sets forth direction. Expounds on appraisal of commercial timberland, evaluating local private market practices in the valuation of commercial timberland and in the development of the timber cruise, requirements for contract check cruise, and Regional Appraiser and FS check cruiser responsibilities.

23: Changes section title from “Mineral Properties” to “Application by Property Type: Grazing Land and Ranches,” and sets forth direction. Adds the Uniform Appraisal Standards for Federal Land Acquisitions (UASFLA) references and expounded on guidance.

24: Establishes code, caption, and sets forth direction for Application by Property Type: Minerals and sets forth direction.

25: Establishes code, caption, and sets forth direction for “Appraisal Applications by Property Type: Water Right,” and provides guidance and references to the UASFLA.

26: Establishes code, caption, and sets forth direction for “Improved Properties,” and provides guidance for the appraisal of improved properties and references to UASFLA.

27.1: Establishes code, caption, and sets forth direction for the “Forest Legacy Program” to align with FSM 5410.73 and the USDA Forest Legacy Program Implementation Guidelines.

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21 - Applications by Program Area

21.1 - Purchase

Federal real estate acquisitions are governed by the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended (Uniform Act) (42 U.S.C. 4601, *et seq.*) and associated implementing regulations at 49 CFR 24. The Uniform Appraisal Standards for Federal Land Acquisitions (UASFLA) are written specifically to meet these requirements. Appraisals supporting agency purchase acquisitions must meet the standards in the UASFLA.

As indicated by its name, the Act seeks to ensure uniform treatment of entities who are selling their property to the United States. The same appraisal principles generally apply whether the property is being acquired through eminent domain or through voluntary sale. However, when eminent domain is not contemplated, and the landowner has been so notified, the Agency has some flexibility in the application of appraisal procedures noted in the UASFLA. Assignment instructions must be clear if deviation from the UASFLA is contemplated. Appraisals should be documented as directed by guidance in FSM 5410 and FSH 5409.12 and as instructed by the assigned review appraiser.

21.11 - Market Value, Highest and Best Use, and Larger Parcel

Market value is the amount in cash, or on terms reasonably equivalent to cash, for which in all probability the property would have sold on the effective date of value, after a reasonable exposure time on the open competitive market, from a willing and reasonably knowledgeable seller to a willing and reasonably knowledgeable buyer, with neither acting under any compulsion to buy or sell, giving due consideration to all available economic uses of the property (UASFLA, 1.2.4).

Essential to the appraiser's conclusion of highest and best use is the determination of the **larger parcel** (FSH 5409.12,13.5). The appraiser shall make a larger parcel determination in every appraisal conducted under UASFLA, even in minor partial acquisitions in which the appraiser is instructed not to do a complete before and after appraisal (UASFLA, 1.2.7.3.1). Appraisals of non-Federal fee ownership for voluntary sale to the United States, specifically purchased by the United States Department of Agriculture (USDA) Forest Service, requires a ***larger parcel*** analysis as prescribed in the current edition of the Uniform Appraisal Standards for Federal Land Acquisitions (UASFLA).

21.12 - Multiple Tracts

Caution should be taken when appraising properties composed of scattered tracts, especially when the highest and best use varies from tract to tract. Use sales with a similar configuration and highest and best use to determine value in these situations. It is usually not appropriate to appraise each individual tract and then total each tract value for an overall value. If there are

few similar sales, the appraiser shall consider whether an adjustment based on size and configuration is applicable in the market area.

In exchange cases, treat both sides of the proposal the same. In certain exchange cases special instructions to the appraiser may apply when the exchange involves the assembly of multiple ownerships for exchange to the Government. These instructions must be listed in the Assumptions and Limiting Conditions section of the appraisal. Multiple-parcel Federal lands involved in assembled exchanges must be subjected to the same valuation techniques as the non-Federal lands.

In all other appraisals of multiple, scattered tracts, address the situation and explain how total value is influenced.

21.13 - Assembled Purchases

An assembled purchase is a configuration that must be identified by the Authorized Officer in the Request for Appraisal Services when the non-Federal party is requested or authorized to assemble two or more non-Federal ownerships into a single entity for conveyance to the United States by purchase. An ownership is a property under beneficial control by the same party. The assignment instructions must inform the appraiser as to the several ownerships.

The non-Federal ownerships being assembled for purchase are to be valued in the manner they were acquired. The valuation of individual ownerships must be supported by an independent analysis of the larger parcel, and appropriate value conclusion(s). The sum of the individual non-Federal ownership market values shall not be reported by the appraiser as it may imply a conclusion of market value for the whole (See FSH 5409.12, ch. 10, sec. 14.22).

21.14 - Phased Closings

Phased closings occur when the entire transaction cannot be closed in a single action. The intent to process a transaction in a phased manner should be documented in an agreement with the landowner, must be communicated in the Request for Appraisal Services, and be reflected in the appraisal instructions. In all instances, the Forest Service must demonstrate clear intent to acquire the entire parcel in phases, and the acquisition values must be based on the contributory value of the larger parcel (see FSH 5409.12, ch. 10, sec. 14.4).

Individual phases are not appraised. The entire property to be acquired or conveyed is appraised, and the consideration for the various phases is based on an allocation of the value of the whole. The review appraiser assigned to the case shall determine the allocation of approved values for each phase. Specific descriptions of the portions of the property to be conveyed in the various phases may or may not be known at the time of assignment. When practical and after consultation with the assigned review appraiser, the Authorized Officer should include descriptions of the preferred and/or most plausible apportionment in the appraisal request. The assigned review appraiser may then include the allocation as part of the

appraiser's assignment. If unknown, the assigned review appraiser shall instruct the appraiser to provide logical contributory components so that the review appraiser may allocate the market value among the phases as the information becomes available. The assigned review appraiser may need to obtain more information from the appraiser in order to make allocations. As the intent is to acquire the whole over time, it is generally not necessary to support such allocations with extensive analysis. The allocation is intended to be a conclusion given the attributes of the entire property and the specific attributes of the phase being considered. The assigned review appraiser's report of the allocation should include the value of the whole property, summarize phases to date, and conclude an allocation for the phase(s) being analyzed. The report must clearly inform the reader that the allocation is not a conclusion of market value for the individual phase(s). Generally, unless the agreement specifies otherwise, appraisal updates are not necessary for later phases for the duration of agreement.

21.15 - Multiple Case Acquisitions

In some situations, it may be necessary to use more than one case to acquire a large property, which may involve two or more purchase cases, or some combination of land exchange and other adjustment tools. The maximum timeframe for multiple case acquisition projects should not exceed 4 years, with shorter timeframes preferred. It is inappropriate to include any provision in the Exchange Agreement, Option to Purchase, or other appropriate document, to pay interest in these cases. Instructions for the appraisal(s) required for such an acquisition may be complex as exchanges, purchases, and other adjustment tools may require different authorities and valuation instructions. Care must be taken to clearly define the portions of the property to be acquired through the various program areas, and to provide appropriate appraisal instructions (see FSH 5409.12, ch. 10, sec. 14.5).

21.2 - Exchange

21.21- Market Value

Regulations at 36 CFR 254 provide the definition of market value which must be used in appraisals supporting agency land exchange actions. "Market value means the most probable price in cash, or terms equivalent to cash, which lands or interest in lands should bring in a competitive and open market under all conditions requisite to a fair sale, where the buyer and seller each acts prudently and knowledgeably, and the price is not affected by undue influence." The regulations also require the opinion of market value for the Federal lands and interests be developed as if in private ownership and available for sale in the open market.

21.21a - Highest and Best Use

Regulations at 36 CFR 254 provide the definition of highest and best use which must be used in appraisals supporting agency land exchange actions. Highest and best use is defined as "an appraiser's supported opinion of the most probable and legal use of a property, based on

market evidence, as of the date of valuation.” This definition of market value is compatible with accepted appraisal methodologies for developing an opinion of highest and best use.

21.21b - Larger Parcel

For purposes of an exchange appraisal, the tracts to be appraised are defined in the property description contained in the Agreement to Initiate (ATI). Even if the property described in the ATI is part of a larger contiguous ownership that clearly has a unitary use, the lands outside of the property described in the ATI should not be considered by the appraiser in either the larger parcel determination or in reaching a conclusion of highest and best use.

If an appraiser concludes that the property described in the ATI constitutes two or more separate larger parcels, the method of valuation is generally fact dependent and, in most cases, will be controlled by the provisions of the ATI. In some instances, the appraiser may be instructed to value the different larger parcels as separate entities, while under other circumstances the appraiser may be instructed to value the larger parcels only as they contribute to the whole, as if the property described in the ATI would be sold from one seller to one buyer in one transaction (UASFLA, Section 1.12).

21.21c - Hypothetical Condition

Although not subject to local zoning, Federal lands must be appraised as if in private ownership, available for sale on the open market and zoned consistent with similar non-Federal properties in the market area (36 CFR 254.9, b.ii).

21.21d - Multiple Parcel Exchanges – General

FLPMA requires appraisals supporting land exchanges to be consistent with the UASFLA to the extent appropriate. UASFLA itself notes that some of its provisions must be modified for Federal land exchanges and requires the Agency to establish policies as well as to develop case-specific instructions.

The UASFLA make the point that unlike a purchase acquisition, where the Federal Government has the ability to acquire the property via eminent domain, an exchange is a purely voluntary transaction. The United States cannot force a landowner to convey his or her property in exchange for lands. The United States can force a landowner to convey his or her property in exchange for just compensation. Even if an agency purchase acquisition is processed in a purely voluntary fashion, the Government is obligated to appraise the property in a manner generally consistent with the requirements of the Uniform Act and its implementing regulations. In a land exchange, the United States and the landowner voluntarily sign an Agreement to Initiate (ATI) which defines the property to be exchanged on both sides. FLPMA requires the value of the Federal lands to be equal to the value of the non-Federal lands, and where they are not, the law generally requires cash equalization.

21.21e - Multiple Parcel Exchange – Assembled

In an assembled land exchange, the non-Federal party assembles two or more non-Federal ownerships into a single entity for conveyance to the United States for equal value Federal lands. An assembled land exchange must be documented in the ATI. An ownership, which may include multiple tracts, is defined as a property under common title by the same party (ies), (see FSH 5409.12, ch. 10, sec. 14.21).

The appraisal instructions for this assignment must delineate the various ownerships which are to be appraised. Again, depending on the provisions of the ATI, the value of the various parcels may be estimated as independent parcels, or as a single tract to be sold in a single transaction. Unless given specific instructions, the appraiser has discretion as to documenting the appraisal analyses under one cover or in multiple reports. If appraised separately, the appraiser is to analyze and report a value opinion for each ownership as described in the appraisal instructions, with no consideration given to the possible influence on value which may result from offering all the ownerships on the market at one time. The sum of these individual market value conclusions is not the market value of the whole, but this sum must be utilized as the basis for determining “equal value” for assembled exchange as required by FLPMA. The appraiser should not sum or otherwise combine these values in the appraisal report as it would imply a conclusion of market value for the whole.

In an assembled exchange, the Federal lands must be appraised in a manner similar to the non-Federal lands. A valuation consultation performed for the exchange may have informed decision-makers as to the appropriate groupings of the Federal property to allow for a similar appraisal process on both sides of the exchange. In such a case, the appraisal instructions must instruct the appraiser as to these groupings. Alternatively, the appraisal instructions may require the appraiser to recommend groupings to the assigned review appraiser as an intermediate product of the assignment. The appraisal instructions must then be amended to call for the appraisal of the various groupings.

Considerations for grouping the Federal parcels may include:

Differing status – If an exchange includes public domain lands and acquired lands, it is necessary to allocate the overall value between the two. Consideration should be given to grouping the parcels by status. Consideration may also be given to grouping acquired federal lands in the configuration in which they were acquired.

Economic Factors – Consideration should be given to grouping Federal lands based on economic units, different highest and best uses, or different markets. For example, timbered property considerations may be species type and size, export versus domestic market suitability, haul routes, or timber mill locations.

Contiguity/Location – Consideration should be given to grouping Federal lands based on contiguity or location. In other words, parcels that do not share a common boundary or are widely scattered could constitute separate parcels for appraisal purposes.

This list is not intended to be all-inclusive. The assigned review appraiser should consider the above as well as other market factors. The two principles which guide the process are to;

1. Treat both sides of the exchange in a similar fashion, as much as possible; and
2. Protect the interests of the United States.

The exchange should be fair to both parties, but the valuation consultation should guide the decision-maker so as to avoid configuring the Federal estate in such a manner that would lead to it being devalued.

The sum of the value of the various groupings is not the market value of the Federal lands but must be used as the basis for determining “equal value” as required by FLPMA. The appraiser should not sum or otherwise combine these values in the appraisal report as it would imply a conclusion of market value for the whole.

21.21f - Approximately Equal Value Exchanges

Some land exchanges can be negotiated at approximately equal value. Regulations at 36 CFR 254 define approximately equal value as a “comparative estimate of value of the lands involved in an exchange which have readily apparent and substantially similar elements of value, such as location, size, use, physical characteristics, and other amenities.” Such exchanges may only be done if the value of the Federal land is determined to be less than \$150,000 and there are no significant elements of value requiring complex analysis (FSM 5410.42c, para. 4 & 7; and FSH 5409.12, ch. 10, sec. 15.7).

Approximately equal value exchanges do not require an appraisal of the non-Federal property. However, since the non-Federal land for an approximately equal value exchange must be similar in location, acreage, use, and physical attributes, and there may not be significant elements of value requiring complex analysis, it may be cost effective to have the same appraiser prepare a separate appraisal report for the non-Federal land. Upon request of the Authorized Officer, and instructions by the assigned review appraiser, an appraisal report of similar scope may be prepared for the non-Federal land involved in the exchange. The conclusions of the appraiser may appropriately be expressed as a range of value. Appraisal reports supporting approximately equal value exchanges do not require review.

21.21g - Dual Authority Exchanges

When an exchange involving Federal lands with both reserved public domain and acquired status is negotiated, it must be done under dual authorities. In such cases, the appraiser is to

develop a value conclusion for the entire Federal property but must allocate the Federal land value between the reserved public domain and the acquired land. The value and acreage of the non-Federal lands must be allocated in a manner proportional to Federal allocation.

21.3 - Conveyances

The Agency may convey lands under various authorities and the procedures for such conveyances, as well as appraisal implications, vary. When properties are offered for conveyance competitively, direct market competition establishes market value. It may be necessary or desirable for the delegated review appraiser to provide market information to inform the authorized officer in such conveyances. When Federal properties are not offered competitively, the sale price is generally established by an agency approved appraisal.

Appraisals prepared to support agency conveyances should generally follow the UASFLA, but as conveyances are not subject to the Uniform Act, not all provisions of the UASFLA may be applicable or necessary. In these situations, the scope of work may be modified. Therefore, these standards may need to be modified and clear project-specific instructions developed. Definitions for market value and highest best use from the UASFLA are appropriate. Conveyance appraisals are to be prepared under the hypothetical condition that the property is in private ownership and zoned in a manner consistent with similar non-Federal properties in the market area.

Larger parcel analysis as defined by the UASFLA is not necessary in conveyance appraisals. Unless provided otherwise in law or regulation, the larger parcel is defined by the property to be conveyed. Therefore, prior to making a decision as to the specific parcel for conveyance (absent law or regulation specifying the property to be conveyed), the Authorized Officer may need valuation advice as to its size and configuration.

Unless hazardous materials are mitigated, agency conveyances are “as is,” with full disclosure of any known lead, asbestos, underground fuel tanks and the like. It is therefore, inappropriate to use an assumption that they do not exist. The appraisal should consider the value of the property with all the risks inherent in known or unknown environmental conditions. Exceptions must be supported by information in the Request for Appraisal Services and in the instructions provided for the assignment. Such an exception may be appropriate when conveying a parcel to the potentially responsible party that caused the contamination.

21.31 - Small Tracts Act Conveyances

The Small Tract Act (STA) authority is a relief authority designed to resolve specific title claims, innocent encroachments, and other issues (FSH 5509.11). Properties being conveyed under the STA authority are often small uneconomic portions of a larger tract. When that is the case the sale price for the parcel to be conveyed is to be calculated based on its contribution to the value of a hypothetical property reflective of the physical attributes of the property to be conveyed, but of a size typical of similar properties in the market area. The value of the

hypothetical property, converted to dollars per acre, is to be applied to the size of the property to be conveyed. Improvements to National Forest System land made by any persons other than the Government may be excluded from the property value determinations (36 CFR 254.42).

The market value of the hypothetical property is determined either through an appraisal or through a waiver valuation. A waiver valuation may be prepared if the valuation assignment is noncontroversial, uncomplicated, and the value is \$25,000 or less (49 CFR 24.102(c) (2)). The authority to conduct appraisal waivers is limited to properly trained Forest Service Realty Specialists as determined by the Regional Appraiser (FSM 5410.71, ch. 10). When the hypothetical property does not meet waiver valuation requirements, an appraisal must be conducted. Similarly, the Regional Appraiser may consider waiving the review of an appraisal indicating an appraised opinion of value for a Small Tracts Act case at \$25,000 or less (FSM 5410.42c, para. 8).

The Regional Appraiser or the assigned review appraiser will determine the type of valuation product necessary for the case depending on complexity and the expected level of compensation to be paid. The value of Federal lands conveyed in any transaction must not exceed \$500,000 (36 CFR 254.35).

21.32 - Special Act Sales

The means for determining the sale price for a special act sale is dependent on the legislation under which the conveyance is authorized. Unless legislation provides otherwise, parcels must be conveyed at market value.

1. Direct Sales. For direct sales, the opinion of value in the agency-approved appraisal report is the market value and sale price of the property (FSH 5509.11, sec. 26.4).
2. Competitive Sales. When authorized by legislation, market value may be determined through a competitive process. Assuming appropriate marketing and an appropriate period of exposure, a competitive process is expected to result in a price representing market value. Prior to offering the property for sale competitively, a suggested opening bid price must be established by the assigned review appraiser. The suggested opening bid is developed to attract a large number of competitive bidders (FSH 5509.11, sec. 26.23b).

Prior to acceptance of a final bid or offer in a competitive process, the details of the process will be reviewed by the Regional Appraiser or the assigned Review Appraiser. Although the Regional Appraiser or the assigned Review Appraiser will not develop an opinion of the market value of the parcel, they will, however, provide advice to the deciding official as to whether the competitive process included sufficient market exposure to generate adequate competition.

Generally, it is the responsibility of the assigned Review Appraiser to monitor market conditions and advise the Authorized Officer of significant market changes subsequent to providing the

minimum bid price, but prior to sale. It is also the responsibility of the Authorized Officer to advise the assigned Review Appraiser if the condition of the property proposed for sale changes, or if there are changes in the marketing efforts described in the SIS report (FSH 5509.11, sec. 26.23b).

3. Brokered Sales. Competitive public sale procedures must be used in the acquisition of real estate broker services in accordance with Federal Acquisition Regulations (48 CFR chapter 1; FSH 6309.32 - FAR). The Project Manager will coordinate broker services with a Contracting Officer and/or Property Management Officer (FSH 5509.11, sec. 26.33).

Use of a qualified Real Estate Broker (Broker) is another means to advertise and market, in conjunction with other appropriate tools, when the Forest Service elects to sell a property or properties without assistance from GSA. The rationale for utilizing a broker instead of GSA should be outlined and justified in the SIS report (FSH 5509.11, ch. 20, sec. 26.33a).

The level of valuation input required for such a sale process must be determined by the scope of services of the Real Estate Broker Contract and the Regional Appraiser. Do not use Brokers for Direct Sales.

21.4 - Special Uses

Special use permit (SUP) fees must reflect market value as determined by appraisal, fee schedules, competitive bidding, or other sound business management practices (FSM 5410.71.6 and FSM 2715). Valuation work supporting special use fees may take several forms. Valuation work products used to establish fees for special use authorizations do not require expiration dates as they will be the basis for indexing fees until a new valuation work product is required (FSM 5410.71, ch. 10, sec. 12).

21.41 - Methods for determining market value

The following methodology is to be considered where other procedures are not otherwise defined in law or policy.

Appraisal. Appraisals which have been reviewed and approved by the Regional Appraiser or the assigned review appraiser are a common method for determining fees.

a. Direct Sales Comparison. Use the comparable sales approach to determine fees if market rental data is unavailable, insufficient, or inadequate. In the direct sales approach, the appraiser investigates and analyzes applicable land sales data for uses similar to the authorized use. Fees based on this method are determined by using a percentage of the appraised value. This percentage rate must reflect prevailing current market rates. This method results in a fixed fee which remains in effect until reevaluated as provided for in the terms of the authorization.

b. Rental Comparison. When there is sufficient data available, an appraisal of the market rent for the authorized use is often the best means to determine an appropriate fee. For this purpose, market rent is defined as the amount in cash, or terms equivalent to cash, which a reasonably knowledgeable renter would pay, and a reasonably knowledgeable landowner would accept, for the authorized use of a specific Federal parcel of land. The analysis should consider the highest and best use of the Federal parcel, the use permitted under the authorization, and the degree to which the authorized use precludes the use of the land for other purposes.

c. Market Return. When there is insufficient market rent data available, it may be necessary to determine the appropriate fee by developing an opinion of the market value of the permitted site, and an opinion of the market rate of return that a reasonably knowledgeable owner of the site would accept in light of competitive uses for the property. If there is insufficient data to support a market rate of return, the appraiser will report on whatever market data is available and comment on the applicability of such data.

For more information on the appropriate fee structure for a specific use, see FSH 2709.11.

21.5 - Partial Interests

The criteria used in the appraisal of partial interests in real property must be consistent whether the property is acquired under threat of eminent domain or voluntary negotiations.

21.51 - Partial Terminology

Partial acquisition. An acquisition in which a portion of a larger property or an interest or partial interest in a larger estate is acquired by condemnation, threat of condemnation, or through voluntary negotiations.

Partial taking. The acquisition of only a part of a property for public use under the power of eminent domain and for which the Government must pay compensation, taking into consideration the damages or special benefits to the remainder property.

21.52 - The Appraisal of Partial Acquisitions

The purposes of partial interest appraisals are to:

1. Estimate the change in value of a property as a result of acquisition of a part of it or acquisition of a portion of the bundle of rights; and
2. Estimate the effect of the acquisition on the value of the whole property and not to estimate the value of the taking or the interest acquired.

Valuation of the taking or rights to be acquired as a separate unit is an improper appraisal procedure.

21.53 - Rules and Principles for Partial Acquisition Appraisal

Appraise partial acquisitions (all roads and trail right-of-way appraisals; scenic easement, conservation easement, other similar easement appraisals; and other partial interests) according to Federal condemnation appraisal practice, law, and rules whether or not condemnation actually is imminent or contemplated (see Uniform Appraisal Standards for Federal Land Acquisitions Sections 1.7 and 4.6).

For partial acquisitions, appraisers shall know and understand Federal law pertaining to condemnation and the terms of the easement, the rights to be acquired by the Government, and how those rights relate to value. In addition, the appraiser shall ascertain the physical effects of a Federal project on the property and determine what improvements are to be included as a part of the project and what items are to be left for the landowner to replace or repair.

The appraiser should seek legal counsel if there is a question of whether the property is within a Federal project area, since it is not the appraiser's responsibility to determine if a particular property is in a project area. Legal opinions should be provided to the appraiser in writing.

Consider the following when preparing a partial interest appraisal:

1. Follow Federal Laws. Federal, not State law, controls.
2. Use Tests of Contiguity, Unity of Title, and Unity of Use to Determine the Larger Parcel. Unity of title may not be absolute. Lands under beneficial control of a single individual or entity may constitute a larger parcel. If the appraiser determines that beneficial control is not the same as title, the facts should be presented to the Office of the General Counsel for written legal instructions. (See Uniform Appraisal Standards for Federal Land Acquisitions for a more detailed discussion of larger parcel determination.)

Normally, do not assume an arbitrary unit or larger parcel that is less than the whole property unless specifically instructed to do so by the Department of Justice.

3. Base Compensation on Loss in Market Value of the Property, Not What the United States Gains. Demonstrate and prove loss of market value in the remaining property. Do not assume that there is damage to the property simply because the Government acquires or restricts some rights. Compensation should measure loss of market value only. Market value is the value on the private market, the price a private buyer would pay. It does not measure a return on an owner's investment.
4. Make No Allowance for Involuntary Acquisition. Do not consider or make allowance for the involuntary nature of the acquisition or taking.

5. Consider Multiple Acquisitions as a Unit. If there is to be more than one partial acquisition from one tract, the before and after evaluations should consider all of the acquisitions as a unit. Value the entire property before any takings and imposition of easements and, then, value the property after all acquisitions. Be careful not to duplicate damages and losses in value.
6. Consider Existing Government Rights. Consider any existing rights the Government has in the land.
7. Acquire Only Specified Rights. If the easement does not specify certain rights, the appraiser may not assume those rights such as the right to fence or the right to cut timber are not acquired. If timber is to be acquired, the deed must so specify.
8. Consider Enhancement and Diminution. Market value does not include enhancement or diminution in value resulting from the use or purpose for which the Government acquires land. In condemnation proceedings, the United States cannot be charged for values that it creates by the very project for which the Government needs the property; nor may the landowner be permitted to suffer any diminution in value attributable to the project.
9. Consider Damages. Under the doctrine of just compensation, when the Government acquires a part of a single tract, an owner is entitled to compensation for the loss in value to the remaining property if any loss occurs. Such compensation is often referred to as "severance damage." Sometimes it is incorrectly referred to as "consequential damage". Consequential damages are not compensable under Federal rules. Damage, loss in value, and so forth mean a reduction in value to the remainder.

Damages are based on the concept that the acquisition either will change the use to a less profitable use or create a burden with respect to the cost of operation.

Acquiring a part of the property, acquiring an easement on a property or a part of it, or constructing the proposed project may limit the highest and best use of the remainder or may otherwise reduce the value of the remainder.

The general rules pertaining to damages are:

- a. There must be a taking for damages to result.
- b. Damage must be directly caused by the project.
- c. Loss in market value is the measure of damage to the remainder.

d. There is no damage if there is no loss in present market value. Therefore, do not consider damages that are speculative and too remote to affect the present market value. Consider damages only if they reduce the market value of the property.

10. Consider Compensable and Noncompensable Damages. Consider in the estimate only those damages that are compensable under Federal law. Generally, damages are compensable or noncompensable as follows:

a. Compensable. To be compensable, damages must affect the value of the remainder. Strict proof of loss in the effect must be definite, of practical importance, and measurable in the market at the time of the appraisal. Examples of compensable damages are:

- (1) Change of highest and best use to a lower use.
- (2) New construction costs such as for a fence, cattle guard, ditch, and so forth.
- (3) Disruption of drainage and irrigation facilities, such as by changing the utility of improvements by moving fences, changing ditches, and so forth.
- (4) Limiting of access (if, and only if, the limitation causes loss of value).
- (5) Reduction of economic size.
- (6) Irregularity of shape (odd-shaped remainders).
- (7) Change of grade that increases cost of access.
- (8) Proximity to the project if it causes loss of value, but not if the loss in value is based on fear of hazards.
- (9) Disruption of the right to see and be seen to a reasonable degree.
- (10) Physical interference with use of the remainder--that is, blocking normal grazing access and so forth.

b. Non-compensable. Federal courts generally have held that compensation need not include payment for consequential or speculative damages or cost incurred by the property owner as a result of the taking. Damages that are not measurable in the market are noncompensable. Examples of non-compensable damages based on court cases (UASFLA 4.6.2.3) are:

1. Loss of business value or going concern value.
2. Loss of or damage to goodwill.

3. Future loss of profits.
4. Frustration of plans.
5. Frustration of contract or contractual expectations.
6. Loss of opportunity or business prospect.
7. Frustration of an enterprise.
8. Loss of customers.
9. Expenses of moving removable fixtures and personal property.
10. Depreciation in value of furniture and removable equipment.
11. Increased production or management costs.
12. Damage to inventory or equipment.
13. Expense of adjusting or restructuring manufacturing operations.
14. Incurrence of removal or relocation costs.
15. Loss or cancellation of revocable permits or licenses.
16. Loss of ability to collect assessments.
17. Uncertainty premium due to tenant's status as a government entity.
18. Interference with development agreements.

11. Consider Benefits. To qualify as a benefit, the change in value must be measurable in the market. Under Federal law, benefits are offset against the entire award--both the damages and the value of the part taken. If the remainder is worth as much after the acquisition and project completion as the whole was worth before, no compensation is justified.

21.54 - Existing Roads

In acquisitions of all or parts of an existing road:

1. Determine the status of the road.
2. Consider general rules from Federal Court decisions.

3. Do not value the road as an improvement. Appraise the amount of the difference between the market value of the land before and the market value immediately after imposition of the easement.

21.55 - Scenic, Conservation, and Other Use-restricting Easements

In appraising scenic easements, conservation easements, and other use-restricting easements, only the before and after rule and method apply. Consider the following:

1. All Allowable Uses. Do not appraise to the most restrictive use allowed. Rather, consider all uses allowed in the after condition and in demand in the private market.
2. Evidence of After Value. Analyze and consider sales of similarly encumbered tracts (if available) and tracts with similar easements. However, one is not restricted to using easement-encumbered sales in the after appraisal. Valid evidence of value of the encumbered property may be evident in sales with the primary value element similar to that allowed by the easement.
3. Effect on Whole Property. If the easement does not encumber the whole property, evaluate the effect of the easement on the unrestricted portion.
4. Beneficial Aspects. Consider any beneficial aspects of the easement such as assured privacy; any provisions for the Government to enhance scenic and environmental features of the property and surrounding properties; the assurance that the Government does not intend to develop other nearby properties which are subject to similar easements; and the freedom from concerns that adjacent properties could be rezoned to allow incompatible or detracting influences.
5. Loss in Value. Consider what the owner has lost in market value, not what the Government has gained by acquisition of the easement.

21.6 - Appraisal of Leased Property

The owner of a property who leases real estate owns the leased-fee estate; the lessee owns the leasehold interest (For leasing of Forest Service Administrative Sites, see FSM 2750 – Leasing Forest Service Administrative Sites).

21.61 - Items to Consider

Value the estates created by a lease according to:

1. Financial stability of the tenant;
2. The forecast for market rent; and
3. The lease terms controlling rights and obligations of the lessor and the lessee.

Consider income stream, its duration, certainty, amount, and risk. Also important are the period of payments, taxes, special assessments, licenses, and fees. Additionally, consider clauses covering insurance, improvements, buildings, and covenants protecting the lessor's interest. Without such clauses, risk is higher and warrants a higher rate of capitalization. Use appropriate capitalization rates.

21.61a - Valuation of the Leased Fee

Consider leasehold value to be the value accrued to a lessee based on the present worth of the difference between contract rent and market rent reflected by current market conditions.

The existence of an indicated leasehold value in the sale price for a leased property reflects the degree of difference between rent charged by the lessor and the recognized market value of that use.

Value the leased fee as the discounted present value of the net contract rent plus the reversion of the property--land and buildings, if any--at the end of the lease, provided the lessee does not have the right to remove the buildings.

Ordinarily, a slightly lower discount rate applies to the leased-fee than applies to the leasehold interest.

21.61b - Valuation of the Leasehold

The most common and most acceptable approach--and that recognized by Federal courts -is that the value of the leasehold is equal to the value of the property free and clear less the value of the leased fee.

A second method to value the leasehold is to capitalize the difference between the contract rent and the market rent at an appropriate capitalization rate. In selecting the rate, consider the duration, certainty, and amount of the net income stream.

These two methods should and usually do produce the same results. However, substantially different answers can occur:

1. When the contract rent is more than market rent (a negative leasehold interest result);
2. When there are lease restrictions that preclude the property from being sublet at its market rent; or
3. When the remaining period of the lease is so short that there is no market for subletting the subject property.

21.7 - Possessory Interests

Reservations, outstanding rights, and life estates all are possessory interests and, for purposes of appraising, are similar to a leasehold estate or an estate for years. When valuing the possessor's right to the interest and the use of the property, remember that the balance of the value should not exceed the fee ownership of the property. This includes the right of the reversion or the right to recover complete possession of the property at the end of the possessory interest period.

21.71 - Items to Consider

Recognize that while each approach may be used to value such possessory interests, sales comparison has limited application, so consider alternate methods. Because the estates are similar, the appraisal methods and premises for valuing leased fees and leasehold apply to appraisal of the value of estates created by reservations. Therefore, the value of a property encumbered by a reservation for a period of time is the present worth of contract rent plus the present value of the reversion of the property at the end of the term. However, usually there is no contract rent for a reservation-encumbered property. In such cases, the value of the property subject to the reservation is simply the value of the reversion.

Appraise the value of the reserved estate by finding the difference between the value of the unencumbered fee and the value subject to the reservation.

On improved property, be sure to determine who the improvements belong to at the end of the term. When Government vendors are permitted to reserve rights of occupancy in land and improvements, consider only the value the improvements will have when and if they revert to the Government. If the vendor has the right of removal at the termination of the reservation, assign no value to the improvement.

Analyze comparable sales from the market to learn how buyers value outstanding rights and reservations. The discount used should reflect the discount buyers apply for not having full use of the property.

21.71a - Reversion Method

Discount for a reservation or outstanding right for occupancy and use (such as a life estate) by computing the present worth of the reversion of the real property being reserved for the period of occupancy at the applicable discount rate.

Remember that improvements depreciate. Hence, use depreciated, not present value for reversion. Normally, use the age-life-straight-line basis. Alternatively, apply market data by comparing with current buildings of the age the subject improvements will be at reversion.

Assume reverted land value to be the present value; any other value would be speculative. Increase the discount rate to compensate for the increased risk of values changing and to include compensation for declining purchasing power of the dollar.

Abstract an applicable discount rate using conventional appraisal approaches.

21.71b - Income Approach Method

1. Estimate net annual rent for the reserved estate.
2. Divide the net annual rent by the value of the reserved property to develop the capitalization (or discount) rate.
3. Use the previously calculated rate to convert net annual rent into the indicated value.
4. Subtract the present value of the reservation from the whole property value to estimate the value of the property encumbered.

21.71c - Reconciliation

If by using both reversion and income approaches you develop different values by each approach, correlate or reconcile the two values to a final conclusion. The income approach is less accurate when reliable rental or lease data from comparable properties is scanty or nonexistent. Consequently, check rental data to ensure that it reflects market rent for the appraised estate.

21.71d - Reservations for Pasture or Grazing Rights

Where pasture or grazing rights are reserved, and if grazing or pasture is the highest and best use, and provided the capitalization rate used applies to grazing or pasture properties, discount the value of the property by the capitalized value of grazing or pasture rents.

Where the highest and best use is different from grazing or pasture, consider the effect the reservation has on the value of the property. Discounting the value of such property by capitalizing the lost grazing rental does not adequately or accurately measure the effect of such a reservation or outstanding right.

21.71e - Outstanding or Reserved Timber Rights

In evaluating the effect of outstanding or reserved timber rights, the terms of the instrument creating the rights are of primary importance. Consider these critical items: the periods for removal; species to be removed and the size trees to be removed; and any State and local harvest regulations, site reforestation, and the provisions for terminating the reservation. Another item to consider carefully is whether the holder of the right is entitled to make a recut

to remove timber or products that were not merchantable at the beginning of the reservation period.

Recognize that when timber rights are reserved or outstanding, a potential buyer's use of the land would be restricted until the rights had been terminated or the land released. After allowing for all of the damage to the young growth that may result from the logging, discount the appraised value present worth by applying appropriate discount factors.

Apply an appropriate discount rate to the total current value of the property that is to revert at the end of the reservation. To determine the discount rate to apply to the reversion, consider the duration of the reservation and the risks to a potential buyer, as well as the rate at which young growth will increase in volume during the deferment period.

21.71f - Outstanding or Reserved Mineral Rights

The amount of reduction in property value from outstanding rights or reservations of minerals or mineral rights is influenced by:

1. The quantity and kind of minerals,
2. The method of potential operation,
3. The duration of the right, and
4. The highest and best use of the property as a whole.

In evaluating the effect of reserved or outstanding mineral rights, consider not only the separate value of the mineral rights, but also the effect on the value of the whole property were the mineral rights exercised. Assess the potential or probability of the exercise of such rights in the reasonably near future. Often, holders of mineral rights also have rights to other resources such as land and timber. If such exploitation is likely and imminent, recognize that the surface value decreases significantly.

22 - Applications by Property Type: Timber

22.1 - Timber Contribution

For most Forest Service applications, the purpose of an appraisal of commercial timberland or a forested property is to develop an opinion of the market value of the whole property. The market value of a forested property is often significantly impacted by standing timber, but not necessarily directly related to the value of that timber as a commercial product. The value of recreational properties may be enhanced by forests due to the beauty and shade they supply to the landscape, for the cover and browse they provide wildlife, or other reasons. Similarly, a property with a highest and best use for residential subdivision may be enhanced by the

presence of trees. This may be in small part due to an ability to harvest some timber to recoup development costs, but in larger part for the enhanced selling price that forested lots may command. The manner in which timber contributes to overall property value is dependent upon local private open market practices and the highest and best use of the property. It is therefore not always necessary or helpful to develop a specific “contribution” to overall value from the timber resource. However, in some markets for some properties, the commercial value of standing timber is a key consideration in developing an appraisal of the whole.

Local private open market practices and property type will dictate the manner in which timber contributes to the value of commercial timberland or a forested property. For commercial timberland, the commercial timber value of the property is typically the primary component of overall market value. For properties with a highest and best use of recreation or residential subdivision, local market practices must be considered in estimating how the standing timber contributes to overall market value.

When it is necessary to estimate the volume of standing commercial timber on a property, local private open market practices will dictate merchantable timber species and products specifications; any timber volume adjustments needed for restrictions on timber harvests under existing state and local forest practice rules, title restrictions, topography, riparian zones, wildlife areas, and so forth; and acceptable cruise standards and sampling error. Local private open market practices will also dictate the manner in which pre-merchantable timber contributes to market value. Considerations for pre-merchantable timber typically include site index, age, species, and stocking.

When appraising forested properties, seek the value of the property as a whole, not the separate value of the timber or the land. For appraisal purposes, the timber has value only to the extent that it enhances the value of the property.

Only the timber that could be harvested under existing State forest practice rules, or other applicable jurisdictions, may be appraised as of the date of value. Volume adjustments must be made for timber retained for riparian, wildlife, or other purposes. These volume adjustments may be designed into the cruise, based on the stand table or, in some cases, an acreage adjustment may be appropriate. Volume adjustments will be documented in the cruise report. Timber that must remain under the existing rules, but may be harvested at a later time, must be grown to the time of harvest using the site index, discounted to present value. The costs associated with meeting reforestation requirements, including site preparation, must be included in the valuation.

When instructions are given to appraise commercial timber on separate parcels, allocate contributory value to each parcel as each would contribute to the whole-property value, except in assembled land exchanges. To have separate value, the timber must have potential to produce income. To have separate commercial value, the standing timber must meet the following criteria:

1. The property must produce timber products that are marketable in the area. Merchantable timber, large enough to produce saleable products, derives its value from the value of such potential products. Appraisers must know what products are present on the tract and what products are marketable. Estimate a contributing value for the merchantable timber only if marketable products are present and are saleable. Pre-merchantable timber may or may not have contributory value to the property. In some cases, pre-merchantable timber is included with the value of the land.
2. There must be sufficient volume per acre to permit profitable harvesting. Logging and road construction costs per unit of volume tend to increase as volumes per acre decrease. Therefore, regardless of total volumes available below certain practical minimum volumes per acre, unit costs are too great to provide a margin for profit. Those minimum volumes per acre vary inversely with the timber values.
3. The total timber volume must be sufficient to attract buyers. Estimate timber value separately using the income approach to determine if it is possible to harvest timber profitably or use the sales comparison approach and apply local practice as the guide to determine whether a specific volume is sufficient to attract a buyer. In addition to total volume and stand density, factors affecting the value of timberlands include volume distribution, species and grade composition, physical features of the tract, logging and hauling costs, accessibility, and site index.
4. Use market practices for acceptable cruise standards and sampling error. Design the timber cruise as if the timber were to be sold on the private open market. Consider whether the commercial timber will be sold on the domestic or export market and measure and grade the timber accordingly.

22.11 - Timber Cruise

If necessary, to provide support for timber contribution, it may be necessary to perform a timber cruise. When a cruise is contemplated, develop a cruise plan consistent with local private open market practice. The Regional Appraiser or the assigned review appraiser and the Forest Service check cruiser shall be involved in the development of the cruise plan when the cruise is done with a contract or when the cruise is incorporated as a part of the requirements in an appraisal contract. When conditions warrant, the Forest Service may elect to conduct a timber cruise by using qualified Forest Service personnel who are knowledgeable of private open market practices. In such circumstances, the cruise plan must be approved by the Regional Appraiser or the assigned review appraiser. In exchange cases, all parties to the exchange should seek agreement on the cruise plan, but ultimately it must be accepted by the Regional Appraiser or the assigned review appraiser before use in the appraisal. A copy of the cruise plan will be included in the Agreement to Initiate (ATI) for exchange appraisals.

The cruise will document the analysis undertaken to determine “current private open market practices” for the area and timber type. At a minimum, this analysis must include a discussion

with private foresters who practice in the area. The objective is to base cruise standards and sampling errors on private open market expectations in the area when timber is sold with the land.

At a minimum, the cruise plan should include:

1. The cruise procedures to be used.
2. Definition of the sample populations.
3. Sampling error.
4. Merchantability specifications and measurements.
5. Area map.
6. Defect and grade rules.
7. The cruise program to be used to compute estimated net volumes.

In exchange cases, the same cruisers, check cruisers and cruise program must be used for both the Federal and non-Federal lands.

Sampling error should emulate local private open market practices and be appropriate for the volume and quality of timber that would potentially contribute to value. Appropriate statistical formulas must apply to the whole cruised area.

22.12 - Check Cruises

When standing timber volume contributes significantly to market value, and the property has been cruised by a private contractor, a check cruise is required. When a property has been cruised by qualified Forest Service personnel, a check cruise is not necessary for Forest Service purposes, but the non-Federal landowners may wish to obtain their own check cruise. A check cruise may be performed during the cruise or soon after completion of the cruise. If performed after the cruise, it must be completed as soon as possible to ensure consistency of plot conditions.

22.13 - Items Provided to Check Cruiser

At a minimum, the following items will be provided to the Forest Service check cruiser by the cruiser:

1. A copy of the plot data.
2. A copy of the sort and grade table.

3. A copy of the timber volumes by type and total for the cruise.
4. A copy of the statistics table.
5. Stand type and plot location map.
6. An inventory of the parcel(s) including acres of merchantable timber, young stands, riparian areas, roads, brush, and non-forested land. The sum of the acreage in the various classifications must equal the acreage shown on the Land Description Verification form.
7. A written timber cruise report documenting the timber description, sampling methods, cruise specifications, and results.

22.14 - Components of a Check Cruise

Check cruises are to be designed to check a comprehensive sample of the original number of sample units dispersed throughout the cruise area. Field measurements and sampling must be done consistent with local private open market practice. The report of the check cruise must discuss the compliance of the cruise with the cruise plan and adherence to expected field measurement tolerance.

1. Cruise plan. Review for compliance with minimum content standards. Review documentation for special or unusual on-the-ground conditions, merchantability standards, product specifications, grading rules or other cruise direction, for correctness and accuracy. Verify calculation of sampling intensity. If unexpected timber stand conditions require a change in cruising method or sampling intensity, ensure the cruise plan is amended and those changes are completed.
2. Field measurements. Conduct a field check to ensure compliance with the cruise plan and to verify measurement accuracy of the cruise. Check for such items as appropriate measurement, tree count, height measurements, sorts, number and location of plots, defect, and grading.

A check cruise may be performed during the cruise or soon after completion of the cruise. The check cruise should be completed as soon as possible, if performed after the cruise to ensure consistency of plot conditions.

22.15 - Timber Cruise Updates

A timber cruise may be updated, when appropriate and with the approval of the assigned review appraiser, based on local standards and growth factors, changes in expected volume or quality, changes in market conditions or stand conditions due to factors such as fire, storms, drought, floods and other environmental factors. Depending upon the stand conditions and the amount of time since the previous cruise, a new cruise may be warranted. Alternatively,

when appropriate, growth modeling followed by ground verification may be authorized. The decision as to whether a new cruise is necessary should consider the overall contribution to value of the timber resource as well as local practice.

Cruise data may be updated within two years of the cruise by using average net growth factors for the species and site conditions unless one of the following occurs:

1. The change in volume exceeds 15 percent.
2. There are unusual weather conditions, such as ice storms, drought, floods, and so forth.
3. There are significant changes in stand conditions due to fire, insect infestation, or disease.
4. There is significant change in market conditions for demand for one or more products.

It may be necessary to consult with the Washington Office mensurationist to more reliably determine the appropriate methodology for updating the cruise data.

The timber may be re-cruised when two or more years have passed since the last timber cruise, except when specific market data dictate a shorter or longer time between re-cruises. Re-cruises that are longer or shorter than two years must be authorized by the Authorized Officer and documented in the appraisal and review reports, along with the cruisers' and check cruisers' names, the percentage cruised, and the most recent check cruise comparison for each cruiser in the appraisal report.

22.2 - Unit Rule

Follow the unit rule that requires appraisal of a property as a whole rather than as the sum of the values of the various physical components or property interests. Under the unit rule, the property being appraised must be valued as a unitary whole and held in single ownership. The value of the whole cannot be derived by adding together the separate values of various interests or components (UASFLA 2016, Section 4.2.2).

22.3 - Highest and Best Use

In analyzing highest and best use, determine whether:

1. The land is chiefly valuable for timber production.
2. The timber present would have separate value if removed or whether removal of the timber would impair the land for other uses and result in lower value. In some

instances, removal of only a part of the timber cover may affect the highest and best use.

22.4 - Acceptable Appraisal Approaches

To appraise timberland, all three approaches to value must be considered. The sales comparison approach must be developed except where it is clearly impractical to do so because of a complete lack of comparable sales. It may be necessary to expand one's market search in terms of time, location, and comparability, but it is very rare that there are no sold or listed properties that could be considered as a potential substitute for a subject property. The appraisal must consider all accepted pricing units common in the market such as overall price per thousand board feet and price per acre and select the most appropriate unit(s) for analysis.

A traditional cost approach is not applicable to an unimproved timberland property; however local appraisal practice in certain markets may utilize a methodology described as a variation of the cost approach which may be applicable. Such an approach relies on the development of a "bare land" value supported by sales of cutover lands and/or extracted from timbered sales and the development of the contributory value of the standing timber and pre-merchantable stocking. Appraisals utilizing such an approach must be careful to avoid a simple summation of "timber value" and "land" value. Depending on local markets, the appraiser may be able to develop a credible opinion of stumpage value from actual sales of stumpage, or it may be necessary to derive such an opinion by utilizing mill prices, logging and hauling costs, severance taxes, and the like. It is then necessary to analyze how this stumpage value relates to the contributory value of the timber when it sells with the land. This is best measured by analyzing sales for which there is a known stumpage value and for which a credible opinion of bare land value may be developed. The contributory value of pre-merchantable stocking must consider the age and stocking of the stand, costs associated with establishing the stand, and paired sales analysis.

In markets where timberland is often purchased as an investment, the income approach may be applicable and must be considered. Discounted cash flow analysis is typically utilized to derive an indication of present value for the uneven cash flows typically associated with timberland. As in the other two approaches, market support is critical for the development of a credible income approach. Investment horizons must be based on market practice. Projected costs and income must be based on consistent and logical analysis. As in most discounted cash flow analyses, the selection of an appropriate discount rate is critical. An appraiser may consider interviews and alternative investments, but the most credible support for the discount rate is derived from actual sales of similar timberland. Discount rates derived from other sources tend to support a price that can be paid in order to achieve a specific return, but may not support market value, the price agreed upon by market participants for a specific investment.

Other appropriate appraisal techniques found in the local market area should be described and explained as to their relevance and applicability to the subject property. If used, an approach

must be well developed and should be presented so that the intended users may clearly understand the elements of value and how they were derived.

22.5 - Sales Comparison Approach

Wherever relatively recent sales of timbered properties essentially similar or comparable to the appraised property are available in the market area, use the sales comparison approach. Units of value must include consideration of all accepted pricing units common in the market such as overall price per thousand and total price per acre.

22.6 - Allocation and Abstraction Techniques

Allocation and abstraction techniques may be used when there is sufficient market data to support their uses.

1. Allocation. Use the separate contributory values assigned to timber and land in timberland transactions as the basis for assigning separate contributory values to the appraised timber and land. Reconcile a total indication of value including both land and timber.
2. Abstraction. Where volumes per acre differ, search for the contribution value of timber and recognize that normally, because of lower logging costs, the contribution value of the timber per unit increases as the volume per acre increases.

22.7 - Income Approach

Consider the following when utilizing the income approach.

1. Stump-to-Truck Costs. Estimate appropriate felling, bucking, skidding, and loading costs for the volumes per acre, timber size, and other conditions resulting from harvest.
2. Road Costs. Base road costs on the standard a typical logger in the area would use to construct roads to harvest timber from private lands, subject only to any restrictions imposed by State law. Forest Service standards usually do not apply to road costs or to other appraisal elements such as reforestation, soil stabilization, and so forth.
3. Administrative Costs. As indicated by local practice, include the estimated cost to the landowner for estimating volume, advertising, and administration.
4. Lumber Selling Price. Base the lumber selling price on the most recent data for the market area.
5. Adjust for Landowner Costs and Profit. Estimate the price a buyer would pay for the timber. Selling the timber entails additional costs for administration, a local consultant to determine volume, timber sale contract administration, and taxes. Also, the seller

expects a profit. Recognize that it takes time to sell and harvest timber. During that time, the owner has holding costs on the land. An appropriate profit ratio or rate of return should recognize the risk of fire, insects, windfall, higher logging costs, higher interest rates on working capital, delays caused by bad weather, and changing product prices.

6. Harvest Liquidation Period. Timber appraisal for whole property appraisals such as land acquisitions or exchanges reflects value on a liquidation basis, rather than as harvest under Forest Service timber management plans.

Use the volume present on the property and the rates of absorption by the private market to calculate the harvest period. Assume a practical harvest period as demonstrated by supply and demand analysis of the market. Determine how much timber could be cut from the tract each year and how much could be milled locally without upsetting the existing price structure.

7. Interest Rate and Discount Rate. Use the market to determine the applicable interest or discount rate for net income.

8. Capitalize or Discount. Discount the future periodic annual income to present worth using the Inwood annuity method and factors. If stumpage sales require payment in advance of cutting, use the payment-in-advance discounting method. The Inwood annuity factor is a method used by appraisers and investors to evaluate a level payment income stream for a fixed period of years predicated on a specific interest rate and assuming no reversionary value at the end of the fixed period.

Consider whether sales are to begin in the first year or if there is to be a deferment period for cruising, sale layout, contract sale advertisement, and so forth. Be consistent with the appraisal premises and discount the actual cash flows as they are to occur.

Recognize that certain administrative and landowner costs recur annually. The discount rate should reflect an appropriate return to an investor in timber and be commensurate with the risks.

22.8 - Log Conversion by the Pond Value Method

Value timber by analysis and comparison to prices paid for logs delivered to the mill. Estimate the most probable price over the harvest period by analyzing pond prices over the past year or more. Deduct logging and hauling costs; then deduct landowner costs and profit.

22.9 - Stumpage Sales Method

Value timber at the price it could command if sold separately from the land. Value land as if it were sold separately after the timber harvest. From the sum of the timber and land values, deduct required costs for selling the timber; reforestation costs; taxes; cruising costs;

administrative costs; selling costs and other legal costs; holding costs (interest or return on the investment); and profit. What remains is the value of the property--land and standing timber.

Estimate the stumpage value or price by comparison to sales of similar stumpage with adjustments for differences such as logging costs, access, species distribution, and quality. If sales of private stumpage are insufficient or inappropriate for comparison, consider public competitive sales, adjusted appropriately for terms and conditions. Paired sales analysis is essential to support this adjustment. The paired sales may be from out of the immediate market area.

When using Government sales, recognize that the bid price is not cash terms. In fact, a buyer of Government sales seldom pays the actual bid price. Adjust the bid price for requirements such as erosion control, slash disposal, and reforestation that are not typical in private sales. Consider the need to adjust price for cash equivalency as Forest Service sales and many Bureau of Land Management and State sales are made on a pay-as-you-cut basis rather than in lump sum cash payments.

23 - Applications by Property Type: Grazing Land and Ranches

23.1 - Direct Sales Comparison Approach

Determine grazing capacity by applying the same criteria used on similar private lands.

In Federal acquisitions involving ranch lands, appraisers must disregard any value added to those lands as a result of their actual or potential use in combination with adjacent federal lands under revocable grazing permits. By law, these Federal permits to use the public domain for grazing are revocable and create no property rights in the holder. Thus, federal grazing permits cannot be considered in estimating market value (UASFLA 2016, Section 4.11.2).

In appraising grazing land, first consider grazing capacity, the capability of the land to support livestock satisfactorily on a long-term basis. Range condition, season of use, class and kind of livestock, suitability for grazing, system of management, adequacy of range improvements, productivity of the land, and similar items are all important elements that affect grazing capacity. The value of grazing capacity depends mainly on the demand for it. Consideration must be made for the contributory value of recreational uses, such as hunting, fishing, dispersed camping, hiking, and so forth.

To compare values of grazing lands, it often is necessary to reduce sales transactions and the subject to a common denominator such as animal unit. Conversion factors may vary depending on the locality, age, and size of animals involved, and other considerations.

Recognize that in many areas, the rate of return on some ranch investments is less than interest on bonds, stocks, or savings accounts. For some owners, ranching provides a tax advantage; for others it may be the only way of life that appeals to them. Where such market conditions exist, do not rely on the income approach; the sales comparison approach is most valid.

In many areas of the country, recreational or “lifestyle” buyers are having a significant influence on the market for grazing lands. In such areas, the capability of the land to support livestock may be less of a factor than scenic quality, hunting and fishing opportunities and other factors. Market research is critical to inform the appraisal analysis as to the appropriate local factors that have a significant influence on market value.

In conducting that analysis, the appraiser shall have an understanding of the factors that typically have an influence on the economic capability of a property to support grazing. Grazing capacity is the capability of the land to support livestock satisfactorily on a long-term basis. Range condition, season of use, class and kind of livestock suitable for grazing, system of management, adequacy of range improvements, productivity of the land, and similar items are all important elements that affect grazing capacity.

As in any appraisal analysis, the appraiser must develop appropriate units of comparison. In analyzing lands which are valued for their grazing capacity, a common denominator often used is animal unit. An “Animal Unit” is typically defined as a mature cow, typically weighing 1000 pounds, or the equivalent in any class of livestock. An “Animal Unit Month” (AUM) is the amount of forage necessary for the sustenance of the mature cow or its equivalent for a period of one month. Conversion factors may vary depending on the locality, kind or class of livestock involved, and other considerations. Caution should be exercised to determine if the subject property is currently over or under its reported carrying capacity. Similar caution should be exercised when analyzing comparable sale properties.

23.2 - Cost Approach

Estimate land value through comparable land sales and then add the contributory depreciated replacement value of the improvements to arrive at the total value.

Adjust for improvements on the basis of improvement costs per acre, per animal unit, or as a lump sum. Adjustments for improvements per acre or animal unit factor out any size differences in the properties being compared.

23.3 - Income Approach

Develop the income or earnings approach based on:

1. Land rental,
2. Owner-operator earnings analysis, or
3. Income from recreational activities.

23.4 - Animal Unit Method

Either the sales comparison or cost approach may be used to implement the animal unit method. The term “animal unit” refers to the investment made to support one animal for a

specific time (usually 1 cow for 1 year). Use the animal unit method to estimate the value of large units that involve valuable improvements, leases, and other conditions that are difficult to factor out.

23.5 - Effect of Leases

Federal grazing permits/leases issued under the Taylor Grazing Act (TGA) of 1934 allow the permit/lease holder the privilege to use publicly owned forage. By law, these federal permits to use the public domain for grazing are revocable and create no property rights in the holder (43 U.S.C. § 315b (“issuance of a permit pursuant to [this provision] shall not create any right, title, interest or estate in or to the lands”); *Fuller*, 409 U.S. at 492-93). The Supreme Court has held that when the United States acquires lands which have grazing permits associated with them, the landowner is due no compensation associated with the Federal grazing rights, even though the local market may recognize a value associated with such rights. Therefore, any value attributable to such leases is not to be reflected in the value of the property the United States is intending to acquire.

It is appropriate therefore, when appraising a privately-owned parcel which currently benefits from a Federal grazing permit or lease, to appraise the property assuming any rights or benefits associated with the lease will not accrue to the buyer of the property. It will be necessary therefore to make an extraordinary assumption with wording to this effect: “A grazing permit [or more than one] held by the landowner currently benefits the subject property. It is assumed, for the purposes of this analysis, that upon sale of the subject property, the grazing permit will terminate and will not be transferrable to the buyer of the subject property, except to the extent that such a permit will be available to any other individual in the area.”

Analyses of sales that involved associated Federal permits and/or leases require careful study in order to analyze any contribution to the sale price from the associated permits/leases. An adjustment to the sale price must be made or other methodology employed in order to remove any influence on sale price associated with continuing such a lease by the buyer. Do not use ranch sales that involve one or more types of leases in appraising lands for Forest Service purposes without adjustment for the leases. Often, buyers and sellers specify the amount that the leases or grazing permits contributed to the sale price. Subtract the leasehold effect or value from the sale price to find the value attributable to the land involved in the sale when using comparable sales in a sales comparison approach.

As previously mentioned, grazing privileges or leases on Government land have value in the private market even though the Government does not recognize their contribution to value. Their contributory value may not be reflected in the value of the ranch property. Abstract the values of the leases from the sale prices by using prevailing prices paid for the sale of animal unit months in other ranch and grazing lands transactions.

24 - Appraisal Applications by Property Type: Minerals

24.1 - Property Rights

In all appraisal assignments, a clear understanding of the property rights associated with a tract of real estate is essential. An assignment may involve a property where all mineral rights still reside with the owner of the surface. However, the property rights associated with the mineral estate can be complex. It is not uncommon for the mineral estate, or portions thereof, to be severed from the surface estate. When that is the case, the appraiser must understand not only the specific property rights proposed for conveyance, and thus the subject of the appraisal, but also the specific rights held by others. It may be necessary to obtain expert advice from mineral and legal experts to ensure such a clear understanding.

For example, an appraiser may be given the assignment to appraise the “surface rights” of a parcel of real estate. While this may be a common term in a local market area, the rights associated with the surface can vary tremendously. In some jurisdictions, when the owner of the fee simple estate conveys “all minerals and mining rights” associated with a property, the “surface” owner may retain the rights to “common variety” minerals such as sand and gravel; in others the sand and gravel rights are considered to have been conveyed with the minerals. In another example, while a conveyance describing all the coal and usual mining rights sounds straight forward, the nature of those mining rights can vary significantly depending on the date of the transaction and the jurisdiction. In some cases those mining rights may involve surface mining techniques, and in other cases they may not. Therefore, in some cases the owner of the surface can prevent and/or demand a payment for the disturbance of his or her surface. In other cases, the surface owner has no ability to prevent or profit from that disturbance.

When the precise nature of the estate to be appraised is unclear, it is appropriate to involve the Office of General Counsel to resolve legal questions. In such cases the owner of the property being appraised should be consulted in order to obtain his or her best understanding of the estate proposed for conveyance. If there is a significant discrepancy in the opinions of the landowner and the Office of General Counsel, agency realty specialists should seek to resolve the dispute prior to appraisal. When there is potential for significant mineral value, if the parties cannot agree upon the nature of the estate there is little likelihood, in a voluntary transaction, that they will agree on the market value of that estate.

Where the potential for the occurrence of a valuable mineral deposit is alleged, market value is the value of the property as a whole in light of all its attributes. This is not the sum of the values of its components, segments, or potential uses. However, do not preclude evaluation of all components in arriving at the overall value of the property. Appraise mineral property as a whole and include contributory mineral values as part of the overall property value.

It is fundamental that the property rights and interest in minerals properties are identified as part of the problem identification process. The Forest Service must identify the property rights and interests that are to be acquired and valued (UASFLA 2016, Section 1.10.3). The mere

presence of minerals does not establish a market. Federal courts require the showing of a market, poor or good, great, or small for the commodity in question before the quantity and price are used as a factor in the opinion of value (UASFLA 2016, Section 4.8.2). Any property from which one or more minerals (including oil, gas, and geothermal) could be economically produced may be a mineral property. A property has mineral value only if the real property market recognizes that value. Minerals may have significant independent value, but removal and marketing may be so costly that the net contribution to the whole property is negligible. On the other hand, removing the mineral may reduce the property value so significantly that its net contribution is nil when the cost of production, marketing, and delivery exceed the economic value of the resource. In such cases, the highest and best use of the property likely is not mineral production.

Consider that the market value of minerals may not depend solely on their known presence. Market value may be recognized based on demonstrated anticipation of new uses, technical mining changes, or perceived potential for the occurrence of a valuable mineral deposit on the property. Consideration for present or potential mineral production must be based on facts showing that the physical and economic possibility of such activity would be reflected in the price agreed upon between a willing buyer and seller having knowledge of all such characteristics. Private demand for the land for mineral exploitation shall be a substantial probability before the appraiser may introduce evidence relating to value for that use.

24.2 - Consult Mineral Experts

To determine whether mineral potential and value are more than nominal may require advice of specialists. On properties where minerals, oil, gas, or geothermal potential appear to have more than nominal value, obtain advice and assistance from minerals experts, such as mining engineers or geologists, to help evaluate the contribution of the minerals. Appraisers will include a mineral report from the appropriate qualified minerals specialist and will consider those findings when appraising public domain lands. Mineral reports may also be necessary when appraising any property to evaluate the contribution of minerals and to determine surface impact if the minerals are extracted.

24.3 - Apply Unit Rule

Where the potential for the occurrence of a valuable mineral deposit is alleged, market value is the value of the property as a whole in light of all its attributes. This is not the sum of the values of its components, segments, or potential uses. However, do not preclude evaluation of all components in arriving at the overall value of the property. Appraise mineral property as a whole and include contributory mineral values as part of the overall property value.

24.4 - Mineral Property Valuation

The selection and evaluation of comparable sales and the methodology utilized in the income approach are both driven by the interest being acquired and valued. The oil and gas industry

makes a distinction between the working interest and the royalty interest. In a federal lease sale the successful bidder acquires a working interest and the United States retains a royalty interest. For hard rock mining, there are contributing and noncontributing interests. The mining company controls the contributing interest and the United States usually has a passive noncontributing royalty interest (UASFLA 2016, Section 1.10.3).

Value potential mineral property or a developed mine and business using the sales comparison or income approach. Whether selecting comparable sales or estimating income, the appraiser must reasonably estimate the size, shape, position, and grade of the deposit. Examine the property to determine quantity and quality of reserves, mineability of the deposit, access to the property for mining purposes, surface conditions affecting mine development, costs, markets, and the stage and extent of mining-related property improvements (exploration, pre-feasibility, feasibility, or production). It may be necessary for the appraiser to consult with a qualified minerals specialist or mining engineer regarding these characteristics.

When valuing the noncontributing interest, the sales selected for analysis should be transfers of property with the same interest. For the income approach, the income that would be analyzed would be the present value of the anticipated future royalty income stream.

24.5 - Direct Sales Comparison Approach

Mineral rights may have ascertainable market value. Estimate market value by the analysis of market data. Use either the last sale of the subject, adjusted for changes in conditions, or comparable sales or quotations, adjusted as appropriate. Inspect or inventory the property consistent with the inspection or inventory of comparable sales. Valuation may require data from other areas. Categorize each comparable sale and the subject property in terms of its stage and extent of property improvement, and rate each property in terms of the property's attributes such as access, surface conditions, reserve quantity and quality, and mineability. Use these ratings to assist in estimating the value of the subject property.

24.6 - Income Approach and Methods

Valuation by the income approach assumes mining and extraction of the mineral product and is based on the concept that the property must provide a return of and on capital.

Within the income approach, use the royalty method to appraise mineral properties. Do not base value on the estimated gross quantity of mineral substance multiplied by a unit price. Such a value estimate is unacceptable.

Use the income approach only in areas where the kind, amount, selling price, costs including royalty payments, and interest rates can be identified.

24.7 - Royalty Method

Royalty is payment to the owner of mineral rights for the privilege of mining and producing the mineral, i.e. the passive noncontributing royalty interest. To use the royalty method, estimate

the value of mineral rights by capitalizing the net royalty to the fee owner of the minerals. The income analyzed would be the present value of the anticipated future royalty income stream.

25 - Appraisal Applications by Property Type: Water Rights

A water right is a usufructory right, or the “right to use” a certain portion of water from an identified source in accordance with its priority date. It includes the right to sell, lease, or change the type of use, place of use, or place of diversion subject to state rules (limited to historic consumptive use, no injury or enlargement). It is a real property right and can be passed by deed or taken by adverse possession.

Water rights may have a substantial impact on the uses and market value of a property. In the valuation of water rights, it is important to note that water rights are established under state law. The laws governing water rights vary significantly by state, county, or local jurisdiction. State laws on surface water follow one of three systems. Riparian rights in most Eastern states, prior appropriation in most Western states, and a hybrid system that covers both riparian and appropriation elements (California, Kansas, Nebraska, North and South Dakota, Oklahoma, Oregon, Texas, and Washington). Generally, states have this hybrid system because riparian were historically recognized, but the state has change to an appropriative system. Groundwater rights are generally allocated based on ownership of overlying land, prior appropriation, or state management (UASFLA 2016 Section 4.8.5).

Various laws in riparian-doctrine states regulate reasonable use to protect other riparian owners. Under prior appropriation which is a “first in time, first in right” concept where water rights are allocated based on the quantity of water that can be put to beneficial use. Beneficial uses of water are identified by state statutes or common law (court). Typical beneficial uses include domestic, irrigation, industrial, manufacturing, municipal, power, fish and wildlife culture, and stock watering. At a minimum, appraisers should consider the type of water right being valued, its seniority, demand, drought, type of use, historic use, conversion, and requirements for transferring place of use (UASFLA 2016, Section 1.10.5).

26 - Improved Properties

The appraisal literature adequately describes appropriate methodologies for the appraisal of improved properties. As with other property attributes, the unit rule and consistent use principle must be scrupulously observed. In most cases, the estate being conveyed, and therefore the estate being appraised includes land and buildings. The assignment, therefore, is the value of the whole property. If market practice or valuation methodology requires development of an independent value of the building(s), the appraiser shall be careful to appropriately develop such a value as it contributes to the value of the whole property being appraised.

In assignments involving improved properties, it is important to fully develop both analyses of highest and best use (as if vacant and as improved). Land can be influenced by the size, shape,

function, and remaining life of the improvements. For example, there may be surplus or excess land when considered in light of the existing pattern of development. For this reason, all four tests of highest and best use must be addressed in the analysis of highest and best use as improved (UASFLA 2016, Section 1.4.5).

26.1 - Sales Comparison Approach

In applying the sales comparison approach to improved properties, the appraiser should seek comparable sale properties with comparable improvements and make direct comparisons. A common misapplication of the sales comparison approach divides the comparable sale price between “improvement value” and “land value” without sufficient support. Differences in the perceived improvement value of the sale and subject are then used to develop adjustments. Should it be necessary to develop an analysis of the contribution of the land versus the contribution of the improvements to a sales price, such an analysis should be supported by paired sales analysis or other recognized methodologies.

The scope of appropriate analysis pertaining to an improved property varies with the specifics of the case and the market. The level of analysis of the improvements should be commensurate with their impact on value. The appraiser is tasked to focus on the same attributes that the typical market participant would focus on.

26.2 - Cost Approach

The appraisal literature provides ample information on the appropriate application of the cost approach to improved properties. When improvements account for a significant proportion of overall value, the cost approach should be carefully considered. The appraiser shall support estimates of replacement value with data appropriately adjusted to local conditions. Estimates of depreciation must likewise be supported with market evidence. The use of unsupported age-life computations is generally inappropriate.

26.3 - Income Approach

In appraising income producing properties, it may be appropriate to develop an opinion of market value using the income capitalization approach. This approach should generally be used in addition to the sales comparison approach and can serve as additional support for the final opinion of market value. In developing the income capitalization approach, it is critical that the appraiser have market support for every component such as income, expenses, capitalization, and/or discount rates. When properly applied, the income approach can indicate what a buyer would pay at the present time for the anticipated future benefits, discounted for risk and other variables, of owning a property.

This approach is relevant only in certain circumstances such as the valuation of income-producing property with no available comparable sales. Proper application of the income approach requires a distinction between the income generated by the property, such as rental

income or royalty income; as opposed to income generated by a business conducted on the property which must be disregarded. Capitalization of net income must be at the rate prevailing for the type of property and location. The capitalization technique, method, and rate used should be explained in narrative form and supported by a statement of the sources of rates and factors. The preferred source of an applicable capitalization rate is from actual capitalization rates reflected by comparable sales (see, UASFLA 2016 Sections 1.5.4, 2.3.3.5, and 4.4.4).

27 - Forest Legacy Program

27.1 - USDA Forest Legacy Program Implementation Guidelines

Lands or interests in lands may be acquired under the authority of the Forest Legacy Program by the United States or other governmental entities. Appraisal and appraisal review for the purpose of acquiring real property or interests in real property through the Forest Legacy Program using Federal funds must comply with Uniform Appraisal Standards for Federal Land Acquisitions and the Uniform Standards of Professional Appraisal Practice. Additionally, appraisals and appraisal reviews must be conducted in accordance with the guidelines outlined in the most recent version of the USDA Forest Legacy Program Implementation Guidelines or successor document (FSM 5410.73).

For Forest Legacy Program acquisitions by the Forest Service, appraisals must be reviewed and approved by a staff review appraiser assigned by the Regional Appraiser. For acquisitions by a State under the State Grant Option, the State is the entity responsible for the acquisition and can hire their own appraiser and review appraiser, or they can request assistance from the Forest Service appraiser cadre to assist with the appraisal, appraisal review, and/or provide general oversight for transactions under the State Grant Option (see Forest Legacy Program Implementation Guidelines).