1. Getting Started

1.1 Some Good Reloading Books

- Lyman loading and Cast Bullet Guide ($1.69 @ http://www.opticsplanet.com/lyman-reloading-and-cast-bullet-users-guide-9837283.html)
- Press manufacturers' User Manuals - included with new presses, or can be downloaded from various websites. For example, the manual for the RCBS "Rock Chucker" press is online @ http://www.rcbs.com/downloads/instructions/RockChuckerSupremePressInstructions.pdf
- Specific load data can be found in reloading Manuals from bullet and powder manufacturers. Be sure to use this manufacturer-tested data for the exact bullet and powder you are loading. **Guessing can be very dangerous!**

1.2 Equipment

1.2.1 Reloading Press

- Single stage - RCBS Rock Chucker (complete RCBS kit $320 @ Midway), LYMAN Orange Crusher (press only $180 @ Midway)
- Turret Press - LEE T-MAG 2 (press only $200 @ Midway)
- Multi-stage - MEC (shotgun) see: http://www.mecshootingsports.com ($185 @ Midway)
- Progressive - Dillon ($269 and up @ http://www.dillonprecision.com)

1.2.2 Reloading Dies - RCBS, LYMAN, LEE

Dies for pistol calibers typically contain 3 dies:

- Sizer with decapping pin
- Expander die - to open the mouth a bit to accept the projectile
- Seating die - to seat and crimp the projectile

Lee offers die sets that include a 4th "factory crimp" die.

If available, go for the "carbide" dies! The carbide resizing die eliminates the need to lube cases before resizing - a major time/effort saver!

Dies for bottle-nose rifle cartridges may contain 2 or 3 dies:

- partial or full-length resizing & depriming die
- bullet seating die
- [optional] taper crimp die

Shell holders are usually sold separately because they may differ between presses and some shell holders accommodate several calibers. Note that shell holders for reloading presses are usually different from shell holders for Lee Autoprime tools and the like.

Some die makers, like Lee, advocate (and sell) "factory-crimp" dies for many rifle calibers.

Die sets from different manufacturers are typically interchangeable among single stage presses but may not be interchangeable among progressive presses.

1.2.3 Lee Autoprime, or similar

Re-priming can be done with a single stage reloading press, but the process ranges from tedious, to annoying, to a real PITA.

I much prefer to re-prime with a hand priming tool like the Lee "Autoprime" ($13 @ Midway). The primer holder will automatically turn the primers right side up with a little tapping (with no tubes or plastic strips required). Feeding primers into position is easy to do and to check, and pressing the insertion lever is easy and positive. I feel that such a tool makes priming:

1. reliable & consistent - because:
    - it's easy to see that each new primer is positioned properly, and
    - seating depth is positive, making it easy to prevent "high primers".
2. safer because the case mouth is naturally pointed away from the operator. (leeAutoprime - v1 video)

Note that priming tool shell holders typically differ from most press shell holders, so they need to be purchased separately (individually about $3, or a pkg of 11 popular sizes is $17 @ Midway).

Shotshell presses, like the MEC600-Jr, incorporate an easy re-priming step. (MEC600jr - v2 video)

Multi-stage progressive presses like Dillon's typically include an automatic re-priming station.

1.2.4 Powder Measure

Some die sets include a "powder dipper" to transfer powder onto a scale. They are NOT intended to "measure" anything. A "micro-adjustable" powder can be set to "throw" a specific weight of powder to accommodate different powders and load requirements. For example, powder charges for (1590 fps), to 40 gr of IMR-4350 (compressed) with a 110 gr projectile (2298 fps).

The Lee "Perfect Powder Measure" package (about $25 at Midway) works well, but don't try to clean it with any kind of solvents, as some will absolutely destroy the micro-adjuster and other plastic parts (been there, done that).

The RCBS Uniflow package is metal (except for the powder reservoir) and somewhat more expensive ($85 @ Midway). (Uniflow - v3 video)

1.2.5 Precision Scale

To set or verify a specific charge weight for your powder measure, or weigh out an individual charge, or check the weight of a projectile, you will need a scale capable of measuring up to 500 grains If you are only measuring powder charges, a 100 grain capacity should suffice. Either way, the scale should be capable of measuring with 1/10 grain accuracy.

Magnetically-damped beam balances like the Lyman M500 (about $60 at Midway) or the Lee 100 grain "Magnetic Powder Scale" (about $25 at Midway) work well. Digital scales are easier to read, provide about the same accuracy as the beam balances (+/- 1/10 grain), but are somewhat more expensive, e.g. the RCBS "Rangemaster 750" (about $120 @ Midway). (scales - v4a, v4b videos)

1.2.6 Vibrating Polisher, polishing media

A "vibratory" tumbler is an effective (and noisy) device to clean & polish fired cases for reloading. Media options include ground corn cobs, walnut shells, to rice. Polishes (optional) include commercial polishes like Dillon's "Rapid Polish", non-ammonia brass polish, diatomaceous earth, and even toothpaste (many contain diatomaceous earth). (vibratory - v5 video)

Badly tarnished brass cases can be restored (sort of) with a quick dip in household vinegar and a good rinse before polishing.

Because I use carbide resizing dies, I don't use any case lube, and usually de-prime my cases before cleaning & polishing. With regular non-carbide dies, you should clean & polish before resizing, and re-clean after to remove case lube residue, as shown in the Case Prep video coming up shortly.

1.3 Components

1.3.1 Cases
Obviously - these are what you reload.

1.3.2 Resizing Lubricants
Specially formulated lubricants from RCBS and others are OK, but 100% synthetic motor oil is just as good, and far less expensive, see: http://www.tacticoolproducts.com/caselube/

Bottle nose cases should be lightly lubricated before resizing, and straight-sided (pistol) cases should be lubed except when resizing with "carbide" dies; use VERY sparingly.

1.3.3 Powders
Vast selections for both handgun and long guns. Powder and bullet manufacturers' reloading manuals provide specifics of how much to use for each caliber and each bullet type/weight.

1.3.4 Primers
CCI, Federal, Remington, all make good primers, when you can get them. Some new imported brands have become available lately, but I have not tried them.

1.3.5 Projectiles
Lead vs Jacketed

- Lead - " OK for most handguns, and rifle loads with velocities less than 1800 fps. Relatively inexpensive (more so when bullet alloy reclaimed from used wheel weights), great for plinking & target shooting. Can be made at home, but that's another presentation.
- Jacketed - " Good for both rifles and handguns, self-defense, hunting. Full-metal jacket, copper plated, hollow-points, various expansion properties to increase lethality for hunting.

Never use hand-loaded ammo for protection - potential reliability and legal issues!

1.4 Hand-loading Steps

- Case Preparation: Inspect cases for damage; cull any with splits, major dents or base separations.
- Case Cleaning: clean/polish in vibratory polisher
- Lubrication, resizing and decapping, removing case lube (CasePrep - v6 video: https://www.youtube.com/watch?feature=player_detailpage&v=THOL_S7Hngs#t=198)
- Inside neck expansion or flaring (most important for lead bullets) sometimes done by the decapping die (expander - v6b video)
- Priming
- Charging
- Bullet seating, crimping

Here's a quick look at these steps (quickReview - v7 video)

If you are inclined to look at any of these videos again, I have posted them on my website at: http://www.haveguns-willtravel.com/reloading/ - just click on the name of the video you want to see, and it should start playing. If not, email me at diemkae@gmail.com, and I'll try to help.